This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

THE

DICTIONARY

OF

MEDICAL AND SURGICAL KNOWLEDGE

AND COMPLETE PRACTICAL

GUIDE IN HEALTH AND DISEASE

FOR

FAMILIES, EMIGRANTS, AND COLONISTS

BY THE

EDITOR OF THE "DICTIONARY OF USEFUL KNOWLEDGE" &c.

"Hæc remedia salubritatem faciunt."—COLUMELLA.

LONDON
HOULSTON AND WRIGHT
65, PATERNOSTER ROW
MDCCCLXIV

~~150. f. 87~~
157. e. 189.

LONDON:
J. AND W. RIDER, PRINTERS,
BARTHOLOMEW CLOSE.

BIBLIOTHECA·BODLEIANA·

PREFACE.

Many works on Domestic Medicine, and by authors of undoubted ability, have of late years been given to the public. Clever as most of them are, few can lay claim to that practical simplicity so necessary to make a popular book on Medicine generally useful.

The faults observable in some of these Works arise from their being written in too scientific a style, and so overlaid with professional terms as to render the advice they impart either obscure or unsatisfactory; while in others, the information conveyed is so conditional—the reader having two or three modes of treatment laid before him, and then being left to his own judgment to select the most fitting—that all confidence in the remedy is destroyed by the responsibility of having to select the most appropriate means.

The object of the present Work has been to avoid all such errors, and combine in the form of a Dictionary every subject connected with the Human Body, with Medicines, and the Practice of Physic and Surgery. Each subject, though given under its professional appellation, is invariably treated of *under its English name.* Every part of the body, every drug, operation, and disease, will be found adequately though briefly explained, and in such a manner as to leave ample space for the most important feature of the work —a full and reliable description of the symptoms and treatment of all Adult and Infantile diseases, the Prescriptions being so simplified, and the Advice so consecutively arranged, that both may be adopted with perfect confidence, whether in the treatment of an internal *affection or an* external injury.

The Editor of "The Dictionary of Medical and Surgical Knowledge" has brought the experience of more than *thirty* years of active practice, and over *forty* years of professional study, to the task before him; and by addressing his readers in the plainest and fewest words, by explaining the *motives* for whatever might appear doubtful, and by giving such Advice and Prescriptions as have borne the test of his own personal experience, he trusts to inspire that confidence so necessary to all who wish to benefit by Medical Information.

While every care has been taken to avoid all abstruse matter, and to make GENERAL USEFULNESS the chief aim of this Work, such subjects as Digestion, Circulation, Respiration, and all the great functions of life, with Food, Climate, Baths, Emigration, Advice to Mothers, Homœopathy, &c., all interesting in themselves, and full of practical instruction, have been fully considered; so that the promise given with the first number—that every subject connected with the Medical Profession would be found in its pages—will be amply redeemed.

Though the Editor does not counsel the practice of domestic medicine where professional aid can be obtained, yet it has been his stedfast aim to render this Work a reliable counsellor to all persons removed from medical assistance, as well as to make it a work of trust and value to the emigrant and colonist. He trusts his professional status will be a sufficient guarantee for the value of the advice contained in this Dictionary, especially as it is no mere compilation, but *original in every particular* but that of its form.

LONDON,
October, 1863.

ADVERTISEMENT.

With the completion of the Medical and Surgical Dictionary another work has been added to that popular Library of useful knowledge which, under the name of the Enquire Within and Reason Why Series, has so long enjoyed the patronage and confidence of the public.

The high character given of our labours by many professional and non-professional writers, during the course of the publication of this book, has been extremely gratifying, and gives assurance that the promise made two years ago will be found fully redeemed.

One special object with which this publication was started—to put Families, Colonists, and Emigrants in possession of a strictly Domestic Work of Medical Usefulness, in which the Treatment of all Diseases and Accidents should be placed before them in a plain and intelligible form—has it is hoped been realized. No pains have been spared to make it serviceable to all who may be thrown on their own resources in a foreign land; and at the same time to make it a welcome friend to the mother of a family, in the Rearing and Diseases of Infants, as well as in the Invalid and Sick Room.

Few persons if acquainted with the organization of the Human body, or the importance of the function each organ performs, would take those liberties with the physical laws that many now do from ignorance. In the belief that correct information will lead to a better understanding of Health and its blessings, special attention has been given to the vital actions of Respiration, Circulation, and Absorption; that knowing the organization and uses of the lungs, heart, and skin, those abuses might be avoided which are so likely to endanger the harmony of such delicate mechanisms, and interfere *with the just* economy of life. In the same manner, Nutrition and Food, and all the organs connected with Digestion, have received a due share of attention, and will be found equally instructive.

The subjects just named form but a few of those in which, by explaining the anatomy and physiology of the organs that make up the mystery of life, we have sought to inculcate a practical knowledge of the Human frame.

Accidents from Suspended Animation, Bites, Fire, Drowning, Wounds, Fractures, and Dislocations, have been as diligently cared for as Diseases.

This Work has not been written with any view to supersede the duties of the medical man; but to afford those persons removed from professional aid, the satisfaction of knowing *how* to relieve a sufferer, under whatever circumstances he may be placed, till medical assistance can be procured; and to direct those beyond the reach of friend or counsel the best way to treat with confidence and benefit any case of danger or difficulty that may present itself.

Ever mindful of the work as a Family volume, there are some subjects that it became necessary to ignore, or touch on very slightly; while others, without which the Work would have been incomplete, have been grouped under one head, to avoid diffusing information better condensed and confined to one title.

It has been the constant aim of the Editor to impart sound and practical Information, on every subject connected with Medicine and Surgery, in language plain and intelligible to all; and his highest gratification at the close of his task, is the belief that in the hour of need the "DICTIONARY OF MEDICAL AND SURGICAL KNOWLEDGE" will be found a safe Guide and a reliable Friend.

LONDON, *October*, 1864.

THE
DICTIONARY
OF
MEDICAL AND SURGICAL KNOWLEDGE.

The object of this Work is not to supersede the office of the Physician, or inculcate the practice of Domestic Medicine, but only to teach how, in difficult situations, and thrown on his own resources, a person may cure diseases and save life without laying any claim to Professional knowledge; and as no advice will be given in this Dictionary but what has been dictated by experience, or confirmed by personal observation, every reliance may be placed on the Recommendations and Prescriptions contained in it.

But as Diseases often assume characters quite out of the ordinary form, where the remedies beneficial in the morning may be injurious in the evening; a Medical man —whenever attainable—should be consulted in all cases involving constitutional disturbance.

AARON.—The name of a celebrated physician of the Alexandrian school, who flourished in the seventh century; and whose name is chiefly memorable from his having been the first medical authority who described and treated the diseases of measles and small pox. This voluminous writer died A.D. 635.

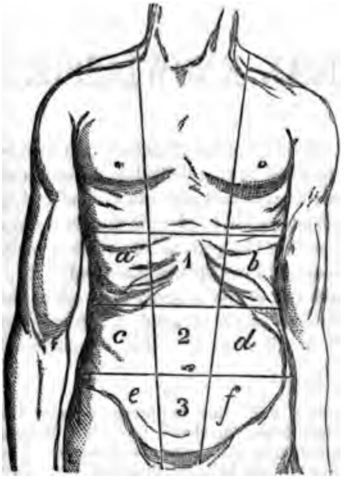
AB.—A prefix of words derived from the Latin, and signifies going from, taken away, or separated. It is frequently used in surgical and anatomical language, as *ab-ductor*, a muscle to take from, or away; and *ab-rasion*, the wearing or rubbing off of the cuticle, so as to expose the sensitive true skin below.

ABACA.—The name of a variety of hemp, — Manilla hemp, — an article brought from the Philippine Islands, where it is indigenous. For its uses and medical properties, see HEMP.

ABDEST.—A sanitary process, and a ceremony of purification, practised by the Mahommedans. A washing of the whole, or a part of the body, performed by the followers of Mahomet on all occasions before commencing their religious formalities. See ABLUTION.

ABDOMEN.—The largest cavity in the human body, commonly called the belly, the word being derived from the Latin verb *abdo*, to hide; because within it are confined from view the great digestive organs, the intestines, the several assistant organs, and the *large arteries, veins,* nerves, and other important vessels; the whole being enveloped in a thin, delicate membrane, called the *peritoneum.* The cavity of the belly is separated from that of the chest by a broad, shelf-like muscle —the midriff, or *diaphragm;* is bounded below by the bones of the hips, or *pelvis,* and the muscles and membranes which cover the openings in and between those bones; it is enclosed at the back and sides by the spinal column, and the muscles which rise from it; and is finally shut in on the front by muscles that assist in the process of digestion, respiration, and expulsion. The organs contained in the belly are the stomach, small and large intestines, liver, gall bladder, pancreas, or sweetbread; spleen, or milt; kidneys, their tubes or ureters; and the bladder; with the spermatic cords in the male, and the womb, or uterus, in the female. The most important vessels in this cavity are the aorta, or great trunk artery, and its two main branches; the large *hollow* or ascending vein, *vena cava;* the nerves of the cavity and lower extremities, the THORACIC duct and organs of nutrition, with the caul or *omentum,* mesentery, and all the lymphatic system of vessels.

Anatomists have divided the front of the abdomen into nine imaginary regions, for the sake of more accurately describing the organs that lie below; and physicians adopt the same plan, to facilitate their description of diseases. These divisions are defined by drawing three imaginary lines horizontally across the belly, and then cutting these by two perpendicular lines, as shown on the annexed figure:



the three centre spaces being called respectively—No. 1, The *epigastric* region, or over the stomach; No. 2, The *umbilical*, or navel region; No. 3, The *hypogastric*, or under or lower belly. The two spaces on each side of No. 1, marked *a* and *b*, are called the right and left *hypochondriac*, or over the liver; while *c* and *d*, the spaces on either side of No. 2, are denominated right and left *lumbar*, or the regions of the loins; and *e* and *f*, the two remaining spaces on either side of No. 3, are called the right and left *iliac*, or the regions of the bowels.

It is not surprising that the space containing the organs by which the economy of life is supported, should be subject to many diseases; though their number will seem less remarkable when we remember how many are the organs in that limited cavity, how important and complicated are their functions, and how opposite, though all working to one end,—the nutrition of the body,—are the several actions performed at the same time in that circumscribed space. Thus we have organic and functional diseases, special and distinctive of each organ; and besides those affections calling for the aid of the physician, the belly is subject to accidents and diseases, where the skill of the surgeon alone can afford relief and cure. Of this character are those accumulations of water known as dropsy of the belly, and for which it is often necessary to puncture the abdomen, and draw off the fluid. See Tapping. In the attempt to lift heavy weights with a sudden jerk, or by violent straining, and from other causes, a small portion of the bowel, or its surrounding caul, is sometimes forced between the edges of the muscles, or through some of the openings in the bones of the hips or pelvis, causing an external swelling, known by the name of rupture—an accident demanding immediate attention. See Dropsy, Rupture, Bowels.

The belly varies in size and shape, according to the age and sex. In childhood it is proportionately large; in the adult male, tense; in the female, pendent, and large in the lower region. In spare persons it is small; in the phlegmatic and melancholy it is unusually large; while in those of a nervous and sanguine temperament it is generally small. The muscles and integument of the abdomen are capable of great extension, both from disease, as in dropsy, and from natural causes, as in pregnancy.

In inflammation of the lungs, and their lining membrane, the *pleura*, in burns or scalds, or in rheumatism affecting the chest, *respiration* is very materially assisted by the muscles of the abdomen; whereas in inflammation of the bowels and their membrane, and similar accidents to the belly, the respiratory action of its muscles is entirely suspended, and breathing exclusively carried on by the chest and midriff.

In consequence of the importance of the functions carried on in the abdomen, this region of the body should always be protected from the effects of cold and wet, either by wearing warm but loose clothing of flannel in front of it, or, in cold weather, protecting it from rain or wind by such a system as that adopted in Scotland, of wearing a plaid in a broad fold across the stomach, and then carrying the scarf over the chest and back, and bringing the end down over the stomach in a second fold.

The diseases of the belly will be found under their distinctive heads. See Muscular Pains of the Belly; Drum Belly, Scalds of, &c.

ABERRATION OF MIND.—A species of temporary insanity, a wandering incoherency of the mind, the result of long impaired health, or of violent and sudden emotions. See Lunacy.

ABIES.—The fir tree, a genus of plants resembling the larch, the properties and effects of which will be considered under Pine, and the products of that order of vegetation.

ABLUTION, or washing away. Any cleansing of the body, whether with or without friction, or the use of towel or brushes, is an ablution.

This highly important sanitary process has, from the earliest epochs, and among almost every variety and shade of religious opinion, been insisted on, both as a moral and spiritual cleansing, a type of purification.

In warm climates, where the perspiration from all parts of the body is considerable, and where the fine particles of dust always floating on the air are prone to adhere to the clammy skin, and by stopping up the pores of the cuticle pave the way for those formidable diseases of the skin, at once so disagreeable to look at and disgusting to endure, all the early lawgivers and framers of religious codes, to insure cleanliness among the ignorant populace, made frequent ablutions a peremptory command of their creeds; thus, what was designed as a social and sanitary enactment, soon grew to be regarded as a sacred ordinance. Ablutions, or *Lustrations*, as they are properly called, constituted an important part of the Mosaic ceremonial, and were frequently practised by the Jews, both by the priesthood and the people. Among the Hindoos, ablution forms one of the most important religious ceremonials insisted upon by the Brahminical creed; and the exhausted devotee who cannot reach the Ganges or any of its holy streams, believes, that if he plunges into any river, and in faith and prayer calls upon the Ganges to cleanse him of his moral stains and spiritual sins, he will be perfectly purified. The Greeks, the Romans, and all the nations of the East, had, to a certain extent, the same opinion of the necessity of frequent ablutions. But of all religions, that of Mahommedanism is the one in which the ceremony is most imperatively believed in and implicitly followed; for it enters into the most ordinary action of life, as well as into the highest and commonest ceremony of the faith, each rite being either preceded, accompanied, or followed, by an entire or partial ablution.

The early Christians were in the habit of undergoing ablution before the taking of the communion: the ceremony of baptism, and the sprinkling with holy water as practised in Catholic churches, are species of ablution. And as the aphorism asserts that cleanliness is next to godliness, it is much to be regretted, both for the health and comfort of the body, that partial or entire ablution is not much more frequently practised. See BATHS.

ABNORMAL, from the Latin *abnormis*, from the original, irregular, malformed; a term in general use among anatomists and medical men to denote a condition of an organ or part different from what it should be in a state of healthy nature.

ABORTION.—A separation from the womb, and a coming away of the child, before the proper period for its expulsion, and when it is impossible for it to live when born.

Abortion can only occur before the *sixth month* of pregnancy; after that period and up to the eighth month it is called a *miscarriage*, and any time between the eighth and ninth month a *premature* labour.

Women of all conditions of life, and at all ages, are subject to abortion, though it is much more frequent with those living in towns than in villages—among the weak and delicate than the robust and vigorous, and more prevalent in young mothers than in those who have had several children. The *causes* that produce abortion are very numerous; sometimes they proceed from a natural weakness of constitution, the system seeming to be unable to carry on the new action unless assisted by art and medicine. Over-fatigue, sitting long in a heated room, dancing, sudden emotions of the mind, such as grief or terror, falls, blows, or kicks, are all occasionally the immediate cause of this mishap; but by far the most frequent reason is a false step, a sudden jar to the body, jumping from a chair, straining to lift a heavy weight, turning a bed, or attempting to reach an article beyond the person's height, or from a violent fit of coughing. There are other causes, but those may be imagined from what have been already described.

Abortion may occur at the end of the fourth week of pregnancy, at the end of the second and third months, the fifth and the sixth; but the two most frequent periods are between the *seventh* and *twelfth weeks*, and at the sixth month.

SYMPTOMS.—When the death of the child—or *fœtus*, as it is called before birth—is the cause of the abortion, the fact is indicated by the soft and flabby state of the breasts, a sense of weight and coldness at the bottom of the belly, attended with occasional shivering, pains in the back and loins, and, after a time, by a bearing down pressure that comes on and goes off at regular periods and intermissions, till the coming on of the proper expulsive pains. Where the cause has been sudden, the first symptoms are generally pains in the back, weight in the bottom of the abdomen, languor, great depression of spirits, shivering, and occasionally fainting. These are followed, after a longer or shorter time, by a discharge of blood, sometimes only trifling, at others excessive and in alarming quantity, accompanied by sharp flying pains along the back and over the belly; these pains gradually increase in strength and duration, till they assume all the characters of regular labour pains, which continue till the child or the embryo is expelled. See LABOUR. As women who have once had an abortion are particularly liable to suffer a repetition of the same misfortune, and at the *same period*, particular care must be taken in the next pregnancy, especially till the woman has passed the period of the first mishap, to protect her from any injury or circumstance which might cause a repetition of the accident; for there is no casualty to which a female is liable, that produces a more serious and depressing influence on the system, than that of abortion; and should it occur with a *first child*, it may be repeated for several years, unless most skilfully guarded against. See MISCARRIAGE.

TREATMENT.—The first object to be considered, in cases of expected abortion, is to arrest the progress if begun, and, if possible, secure the continuance of the pregnancy. For this purpose the earliest symptoms are to be attended to, and these are, pains in the back and loins, sometimes extending over the front of the belly, accompanied with a general heat and irritability of the body, with a frequent desire to empty the bladder, and a slight evidence of blood, or *show*.

In cases of this nature, and before the separation of the child from the womb has been effected, and while there is yet a chance of preventing the abortion, the patient is to be placed on her back in bed, and kept perfectly calm and still, the legs slightly raised, so as to relax the muscles of the abdomen, and napkins, wrung out of cold water or cold vinegar and water, applied frequently over the belly. An effervescing draught, made by dissolving twenty grains of carbonate of soda in the *third* of a tumbler of water, and adding *[illegible]en grains of tartaric acid, is to* be given every one or two hours, and followed the next day by a small quantity of castor oil.

All rich or stimulating foods and drinks are to be prohibited, and every noise or excitement carefully guarded against. In young and robust constitutions, and when the pulse is quick and full, from six to nine leeches should be applied over the womb, and in addition to the effervescing draughts, a seidlitz powder taken once or twice, to act more fully on the bowels. By these means, keeping the body cool and quiet, and the mind tranquil, the threatened danger, by a week or two's rest, may be got over, and nature thus assisted resume its functions, and the pregnancy proceed to a happy termination.

When, however, from the symptoms already given, there is reason to believe the child is dead, the patient is to be kept perfectly tranquil and on her back, bottles of hot water are to be placed to the feet, and a napkin, folded into a large square, and wrung out of cold vinegar and water, applied to the abdomen so as to cover it, while another made smaller is applied to the lower parts; these being at once removed, wetted, and reapplied, as soon as they become warm. A few spoonfuls of gruel, with a little brandy, are to be given from time to time, according to the weakness or exhaustion of the patient.

Should the amount of blood discharged be moderate, the above application will be found generally sufficient to arrest it entirely, or till nature expels the child and its membranes, by a few of the ordinary pains of childbirth; but if the amount of blood be large, and there be an absence of all expulsive pains, a silk handkerchief should be at once wetted with sweet oil, or in the absence of that, smeared with lard, and then piece by piece cautiously passed into the birth, and then, as already directed, the cold vinegar and water is to be applied to the abdomen. The object of this plug, as it is called, is to cause the blood to coagulate internally, and so stop the further bleeding from the womb till the proper pains set in, and the contraction of the muscles of the abdomen shows that the expulsive efforts have commenced, when the handkerchief must be withdrawn to give room for the passage of the child and membranes.

The afterbirth does not always descend at the same time; but as it is of the utmost importance that it should be expelled as soon as possible with safety, a gentle pressure on the abdomen with the hand, or friction over the belly, will, in most cases, excite the womb to contraction, and thus throw out the afterbirth. It must be remembered that all the time the womb is open, the patient is in danger of excessive bleeding, or what is called *flooding;* and when this comes away in gushes, unattended by the necessary pains, it becomes of the utmost importance to empty the womb at once, and by the most expeditious means. For this purpose, a drachm of the bruised *ergot of rye* must be simmered for ten minutes, in about a quartern of water, to which a few grains of soda are added; the liquor is then to be strained, and a wineglassful, with a little sugar, and a teaspoonful of brandy, given as soon as cool enough to drink. See ERGOT OF RYE.

Fainting sometimes occurs from the loss of blood, when small doses of cordials must be given, or a little brandy and water, with twenty drops of sal volatile, and ten drops of ether in each dose; but these must not be too frequently or incautiously administered, the object being merely to rouse, and not to excite the patient. During the continuance of the bleeding, the room must be kept cool, cold air freely allowed to circulate round the patient, and frequent draughts of lemonade, or acidulated waters, given to her for drink. When the abortion takes place early in the pregnancy, and before the child is distinctly formed, all the clots of blood discharged should be carefully examined, in the hope of finding the embryo, as on the discovery of that, the subsequent treatment depends. In cases of malformation, and where, in consequence of the confined dimensions of the pelvis, or bones of the hips, a fully developed child could not be born alive, it becomes the duty of the surgeon to produce abortion, for the safety of the mother, the time at which that operation is to be effected depending on the capability of the parts.

Procuring or causing abortion, either by drugs purposely taken, by means directly applied, or by blows, violence, or force, resulting in the death and abortion of the child, was formerly punished with *death*, though by the common law of England it is now classed only as a felony, punishable by transportation for life, or for fifteen years. See LABOUR, MISCARRIAGE, &c.

ABRACADABRA.—The name of an Assyrian deity, and a secret charm, used in the Middle Ages as a talisman against agues and fevers. This magical antidote consisted of the word *abracadabra written* on a piece of parchment in such a manner as to form an equilateral triangle, by omitting one letter in each line. The charm was then sewn up in a small bag, and either worn on the arm or round the neck, as a safe and reliable amulet.

ABRASION.—A rubbing or scraping off of the outer, or scarf skin. This frequently trifling, but generally very painful accident, is more often the result of falls than of any other kind of casualty; the pain depending on the injury done to the true skin by the removal of the covering cuticle, and the presence of dust, gravel, or other irritating substance adhering to or embedded in the sensitive tissue of the true skin. The hands, knees, and forehead are the parts most frequently exposed to this accident. Sometimes, however, it is attended with a bruise, and even a laceration of the part, in which case the article Bruise must be consulted.

TREATMENT for a simple abrasion.—If the injury is free from dirt, or any irritating substance, a little violet powder must be dusted over the exposed part with a puff; a layer of soft wool, or a piece of cotton wadding, is next to be placed over the powder, and the whole secured by a turn or two of a bandage. When violet powder cannot be obtained, flour may be substituted; or, in default of that, a little magnesia. When dirt or gravel, however, are present, the abrasion must be tenderly washed with a little warm water, removing the deeper seated particles of dirt by means of a camel's hair pencil; a soft piece of linen is then to be laid across the injury, and gently pressed, so as to dry up the moisture. A few drops of the *extract of lead* should be next poured on the exposed surface, and after it has diffused itself over the sore, apply the violet powder, flour, or magnesia, as already directed; put on the cotton, and secure the whole as explained above. As abrasions are extremely painful, great care is necessary in dressing them; but as they heal very quickly, all that is requisite is to clean them from all grit and dirt, and keep them from the air and injury. The first dressing need not be interfered with till the cure is effected by the formation of a new cuticle over the part.

ABROTANUM.—The botanical name of the plant Southernwood, which see.

ABSCESS.—A tumour containing pus; any swelling or cavity filled with purulent matter, formed in the tissue or organ in which it is found by diseased action, the result of inflammation. Abscesses are either superficial or deep seated;—the former, when they form in the cellular tissue on any part of the surface of the body; the latter, when they take place in the texture of some organ or structure of the different cavities. Abscesses are divided into the *Acute* and the *Chronic*,—acute when they rise from an understood and definite cause, and proceed in regular progression to their height; and chronic when the cause of their origin is either unknown or doubtful, and the time of their development extremely tedious: a common suppuration on the fingers, or any part of the skin, is an example of the acute, and lumbar abscess an instance of the chronic form.

ACUTE.—*Cause.* Blows, scratches, pricks, or stings, are frequently the immediate cause of an abscess, by exciting a certain amount of inflammation in the part injured, indicated by redness and increased heat; and as more blood is sent to the spot affected by the arteries, than is carried away by the veins, a certain amount accumulates, and in a measure becomes stagnant, causing the heat and redness. From the mouths of these loaded bloodvessels, a fluid exudes known as *pus*, but commonly denominated *matter*, which is poured into the surrounding texture, where it gradually collects, till the quantity becoming large causes a distention of the skin—the swelling or tumour always attending a superficial abscess: this accumulation of pus, pressing on the nerves below and around, induces the pain always experienced in the maturing or ripening stage of an abscess. At the same time that the bloodvessels are secreting pus, another set of vessels are exuding a substance like the skin of an egg-shell, to line the cavity into which the matter is poured; this substance is called the sac or bag of the abscess, and serves the purpose of confining the matter, and preventing its spreading into the surrounding parts. As more pus is thrown out, room is made for it by the absorption or dissolving of the solids in the neighbourhood, the sides of the space being lined with a continuation of the sac.

Symptoms.—Heat and redness are the first indications of all external inflammations, and as the action increases, pain is manifested in the part, and soon after, the distinctive characteristic of an abscess, a sensation of throbbing; this is soon followed by swelling and a shining appearance of the skin over it. Where the skin is loose and the abscess near the surface, the swelling is generally rapid, and the pain less *severe;* but where the skin is tight, and the matter deep, the swelling is proportionably slow, and the pain and throbbing very severe: thus in whitlow, where there is no room for expansion, the pain is sometimes intolerable.

Treatment.—The first object in all cases likely to terminate in an abscess, is to endeavour to subdue the inflammation, and prevent the formation of matter; this is to be attempted by the application of cold lotions, and a dose or two of aperient medicine, or the adoption of the following. Take of—

Sal ammoniac, powdered 3 drachms.
Dissolve in
Camphor water . . . 1 pint,
Add powdered nitre . . ½ drachm,
And vinegar . . . . 2 ounces.

Mix, and make a lotion, to be applied constantly to the part by means of cloths.

Take one or two compound colocynth pills, according to the age, strength, and state of the bowels, and a few hours after, a dessertspoonful of Epsom salts, dissolved in a tumblerfull of water.

When the abscess is large, and the constitution delicate, the local symptoms are frequently attended with indications of fever, shiverings and hot flushes, in which case the following saline mixture should be given, and continued as long as there is any prospect of arresting the suppuration. Take of—

Tasteless salts (phosphate of soda) . . . . . 2 ounces.
Dissolve in
Mint water . . . . . . 8 ounces,
and add
Tartrate of antimony . 2 grains.

Mix; three tablespoonfuls to be given every four hours. If, after twenty-four hours' application of the lotion, and the employment of the pills or mixture for the same time, the swelling has not increased, and the redness of the part has abated, or the skin has recovered its natural colour, the person may conclude the inflammation has been arrested, and all apprehension of an abscess is at an end. Sometimes, however, a hardness will remain for some days or even weeks: this may be eventually removed by gently rubbing the part, either with the dry hand, or with a little oil or lard, so as to promote absorption by the lymphatic vessels.

When pulsation has set in; and with the heat, redness, and swelling, there is pain and throbbing, it is seldom of any use to attempt to arrest the suppuration; and means should be taken, by applying repeated poultices, to bring the abscess to a head as quickly as possible. The articles chiefly used for this purpose are *bread*, *linseed meal*, and *bran;* but as none of these possesses any virtue in itself, and as the only benefit afforded is derived from the moist heat, that article is the best which will longest hold the heat (see POULTICES); and as a small bag with a few handfuls of bran is the cleanest and most expeditious, it should be generally employed: it has this advantage also over the other two articles, that it requires no repetition, one supply of bran lasting for a whole day. A saucepan half filled with hot water should be kept in readiness by the fire; the bag of bran, with the mouth sewn up, is to be soaked in the water, the excess of liquid squeezed out, and applied as hot as it can be borne to the part, and this process repeated as often as the poultice becomes cool: to retain the heat as long as possible, it is advisable to fold a napkin or handkerchief loosely round the poultice.

The poulticing is to be continued till the top of the swelling becomes soft, and the fluctuation of the matter plainly felt beneath when pressed by the finger, and the skin at the apex becomes thin and white. The abscess is now to be opened by means of a broad-bladed lancet, or a sharp knife, care being taken to make the opening from *below upwards*, so as to allow the easy and entire escape of all the matter from the cavity; a result that cannot be effected if the top of the abscess only be opened. After the escape of the pus, the surrounding parts are to be gently pressed by drawing the two hands together on either side of the opening, so as to force out as much as possible; the part is then to be washed, the end of a piece of lint or rag inserted into the cavity, to prevent the closing of the opening, and another poultice applied, and renewed every hour or two; the lint or rag being withdrawn night and morning to allow of the escape of the matter, and another piece inserted after each dressing. From being thick and yellow, the discharge will gradually become thinner and lighter, till it assumes the appearance of water; and finally ceases entirely, and the opening permanently closes. Sometimes, immediately before the ripening of the abscess, the pain becomes so severe as to destroy both rest and appetite; in such cases 25 drops of laudanum are to be given to an adult at bed-time, or if there is much heat and dryness of skin, 10 grains of *Dover's powder, mixed with a wineglass of camphor water,* is to be given instead, but at the same time.

Sometimes, when the abscess is large, or the constitution of the patient weak or unhealthy, the final healing of the cavity is slow and unsatisfactory; in such cases the patient's health is to be improved by the exhibition of wine and tonics, such as quinine, and a full diet, especially of animal food; and where wine cannot be procured or is inadmissible, a small quantity of stout is to be given three times a day; at the same time, a slightly stimulating lotion is to be applied once a day to the cavity, while the parts adjacent are to be rubbed with the hand night and morning, to excite the vessels to a more healthy and vigorous action. A cloth, wetted in a little weak cold gin and water, and placed in or over the abscess, is often all that is necessary to excite the vessels to action, and effect the healing of the cavity; or a lotion of bluestone, in the proportion of 2 grains of bluestone to 1 ounce of water, will be sufficiently strong for all necessary purposes.

When the abscess occurs on the fingers, hand, or forearm, that member should be kept suspended in a sling at right angles with the body; and when it takes place on the lower extremities, as much rest in the horizontal position is to be taken as possible.

CHRONIC ABSCESSES.—For this form of deep-seated suppuration, see Lumbar and Psoas Abscess.

ABSINTHE.—The name of a favourite French drink, the basis of which is wormwood. See DRINKS.

ABSINTHIN.—The active principle of wormwood; a resin of an intensely bitter taste, but as yet not sufficiently tested to guarantee its medical properties.

ABSINTHIUM.—The botanical name of the Wormwood plant, which see.

ABSORBENTS.—A class of medicines which drink up, neutralize, and render harmless, any acidity or noxious and irritating matters in the stomach and bowels. The most important of the absorbents are chalk, potass, soda, magnesia, and ammonia. See ANTACIDS.

ABSORBENTS.—This word, which is derived from the Latin verb *absorbeo*, and signifies to suck up, anatomically represents a system of minute vessels, whose function is to suck up and carry away the constantly accumulating *débris* or refuse of the body, being opposed in their action to what is understood as the system of secretion, or the small arteries. To preserve these two functions in a state of balance is the design of nature, the result being physical health; for if more matter is secreted than can be absorbed, or more absorbed than can be secreted, the balance is destroyed, and impaired health, or the lost integrity of a part, is the result. These facts are shown, first, in fever, where the process of absorption is much more active than that of secretion: hence the rapid emaciation which forms so striking a feature in fever; and secondly, in dropsy, where more matter is laid down by the secreting vessels—the small arteries—than the absorbents can take away, the result being the increase of bulk, either of the whole system, or a part, as witnessed in general or particular dropsies. The system of absorption is carried on by *three* sets of organs, each distinct; by *lacteals, lymphatics*, and *absorbent glands.* The lymphatics arise by minute orifices from every part of the body, from the head, the brain, the bones, muscles, skin, and bowels. There are two sets of these lymphatic vessels, the deep-seated and the superficial, each, however, freely uniting with the other. These fine, delicate tubes obtain their name from carrying a thin, watery fluid, called lymph, which is the liquid waste of the body, obtained from the most opposite organs and contrary textures. In their progress from the extremities of the body to their termination in the abdomen, the lymphatics pass through numbers of small oval-shaped bodies, called *absorbent or lymphatic glands;* in this manner, the sets converging unite behind the bowels into five or six branches, which soon after terminate in one trunk vessel, called the *thoracic duct.* The lacteals, so named from carrying a milky-looking fluid, rise from the stomach, and from the whole length of the intestines, both internally and externally, absorbing every particle of nutriment given off by the digested food; loaded with this creamy fluid, called *chyle*, the lacteals converge in the *mesentery*, the large fatty membrane connecting the bowels with the spine, where they pass through a double set of glands, and finally terminate by several channels at the enlarged commencement of the thoracic duct, at what is called the reservoir of the chyle, or the *receptaculum chyli.* The two systems of absorbent vessels,—the lymphatics, loaded with the refuse of the body, and the lacteals, charged with the quintessence of all the nutriment received into the system,—having united their two sets of vessels to form the thoracic duct, that tube runs up the body along the side of the spine, and terminates in a vein behind the left collar bone, from whence the chyle is conveyed to the heart, to replenish the blood, exhausted of its nutriment by the service of the body. See LACTEALS, LYMPHATICS, and DIGESTION.

ABSORPTION.—It has long been a question of the greatest interest to science to discover the principle on which the function of absorption is performed, but though many theories have been advanced to explain the mode by which nature effects this important office, the inquiry has not yet received a satisfactory demonstration. We already know that the lacteals can only act on and convey chyle from the stomach and bowels; and that the field of the lymphatics extends to every fluid and to every solid—that the soft brain and the hard bone, the elastic muscle and the tough sinew, are alike absorbed by them and borne away; but by what agency they do this, and pour their contributions of water and nutriment into the veins of the heart, is a question not yet fully answered. One of the most approved theories is that which explains the action as depending in part on capillary attraction, and partly on the principle of *endosmose*, a species of absorption by which a lighter fluid, passing through an organized substance into a denser fluid, has the power to propel the lighter fluid up a tube of any height with a steady and equal motion. That capillary attraction has some share in the operation has been proved by observing the lacteals after death, when every living agent has ceased to act, not only full of chyle, but carrying that chyle actively along towards the thoracic duct. We know that the rootlets or fibres of all trees, and large plants, are terminated with small oval bodies, or vegetable glands, called by botanists *spongiolæ*, and that if these small bodies are removed, the root to which they were attached dies. These spongiolæ are composed of cells filled with a fluid, which being denser than that which they absorb from the earth, the nutriment so taken up is, by the process of *endosmose*, projected along the root to the tree. Analogous to these spongiolæ are the numerous oval glands through which both the lacteals and lymphatics pass to reach their destination in the thoracic duct; and the same action used to explain the mode of propulsion in the vegetable, has been advanced to account for a similar function in the animal economy; for as these vessels have neither the muscular coat of the arteries, nor the suction and forcing power of the heart, to assist their contents forward, a reason must be sought elsewhere, and that already advanced is, at least, feasible.

ABSTERGENTS, from the Latin *abstergeo*, to wipe away, to cleanse. A term formerly much employed in medicine to represent a set of drugs or agents, supposed to possess the power of removing any foul or injurious substance from the body. Such remedial means were almost always employed externally in the form of lotions or decoctions, which being used to wash sores, ulcers, or morbid formations, were supposed to carry off their offensive exudations, and leave the part in a purer and healthier condition. Though water might always be regarded as the most important of such agents, it was seldom that that fluid was applied in its simplicity, the more frequent practice being to boil it with marsh mallows, wormwood, sage, spikenard, and other herbs, supposed to have some special curative properties on external injuries, or blemishes of the body. The Romans possessed an abstergent of singular efficacy, invariably used on taking the hot or sweating bath; this was a blunt, crooked instrument, somewhat resembling a bill-hook, and called a *strigil*, by which they scraped off *the dead perspiration from the limbs and body as* grooms do a horse with a supple piece of steel. See BATH. The best abstergent we possess is the Flesh-Brush, which see.

ROMAN, USING THE STRIGIL.

ABSTINENCE, from *abstineo*, to abstain or forego. Abstinence, or forbearance from food, for that is the only sense in which the word is medically understood, is either voluntary, involuntary, or compulsory.

VOLUNTARY ABSTINENCE is that deprivation from food practised by religious devotees, especially among Jews, Mahommedans, Catholics, Hindoos, and many other Oriental nations and faiths, and is adopted by some as an ordinance of their religion, and typical of some great fact, by this means always kept in the mind and reverence of the follower. By others it is adopted as a means of penance and bodily castigation, as a punishment to the flesh for the vices conceived by the mind. Abstinence not only from animal food, but from a sufficiency of even the poorest and least supporting of vegetable aliment, is carried, by some Christian sects, to a degree little short of starvation. The idea of mortifying the flesh as an atonement for committed sins, is a custom of extreme antiquity. Voluntary abstinence is sometimes adopted as a means of suicide by visionaries and religious monomaniacs. In such cases it is frequently necessary to resort to force to compel the person to receive aliment; the body being secured by a strait-waistcoat, sustenance and medicines are poured into the system by the stomach-pump, till a healthier tone of mind is induced, and the person willingly returns to his food.

INVOLUNTARY ABSTINENCE is that state of deprivation from food to which men are at times compelled to submit from shipwreck, and the sudden loss of all, or nearly all, means of subsistence. In such cases as these, or when men have been immured in dungeons, and left to starve to death, for the first three days the persons totally debarred from food suffer intensely from the pangs of hunger and thirst; after that time, the desire for food or drink becomes less clamorous; the body, however, at that date suddenly gives way, a collapse seems to affect it generally, the complexion becomes yellow, the features shrunk, and the muscles of the limbs soft and contracted; the strength rapidly declines, and the mind, weakened with the body, wanders, or babbles of luxurious feasts and imaginary abundance; all the secretions are suspended, or nearly so, and the desire for food only returns in occasional fits, soon passing off. As the time advances, the body becomes extremely sensitive to the least change of temperature, and, like a thermometer, indicates the smallest variation. The aberration of mind, from want of sleep, and constant watchfulness, soon passes into delirium, and sometimes raving madness. The emaciation becomes frightful, the body appearing mere skin and bone, and the debility so great, that the lifting of an arm, or the slightest motion, will occasionally produce fainting and coma, or a lethargic sleep. The length of time that nature will support a total deprivation of food before the vital powers sink, depends greatly on the original health and temperament of the person who undergoes the test. The longest case on record is that of a young man, who, partly from religious, partly from moral motives, resolved to abstain from all aliment whatever till an allotted task was finished; and, retiring to an obscure lodging, and devoting his days and nights to the duty he had set himself—that of copying the Bible in shorthand—had reached the ***sixty-first day without tasting food;*** when, reduced to a ghastly skeleton, his powers gave way, and his friends at the same time finding him, means were taken to restore the young man to health; but so injudiciously was aliment administered to him, that delirium commenced on the fifth day of their treatment, and death terminated the case eleven days after the resumption of food. During the sixty-one days, this young man was without sustenance, and almost without sleep; half a pint of water a day, into which the juice of one orange was squeezed, was the only nourishment that passed his lips.

THE TREATMENT in all cases of deprivation from food requires to be guided by the most careful vigilance; nothing solid must be allowed to enter the stomach for several days, and the same care that is observed in feeding an infant should be extended to the man or woman who, long debarred from food, appeals to us for sympathy and help. The best aliment to begin with is strong beef tea, thickened with sago or flour; and according to the time the person has been without food must depend the amount given at a time. In extreme cases, a tablespoonful will be sufficient at first, repeated every half-hour for at least two hours, before the quantity is increased to two tablespoonfuls at a time every half or quarter of an hour; *the condition of the sufferer regulating* the amount and times of giving the food.

On the appearance of any flushing of the face, difficulty of breathing, or oppression of the head, the food must be at once discontinued, hot bottles of water applied to the feet, cold vinegar and water to the head, and where the gullet is the affected part, a hot bran poultice put round the throat. The great danger arising from giving food too hastily is a reaction of the system, which not unfrequently terminates in delirium, and a state of great bodily excitement, when according to the severity of the attack, and the rapidity and force of the pulse, must depend the number of leeches which should be applied to the temples, and guide the medical attendant in his selection either of vinegar and water for a lotion, or a bladder of bruised ice for the patient's head, till the delirium is subdued, and the feeding process can be resumed.

When no untoward symptom arises, the thickened soup may be varied with soft bread and milk, the bread being beaten smooth with a fork; this in turn may be succeeded by rice, sago, or tapioca puddings; but animal food ***must not*** be given for some days, and then it should be *boiled*—mutton being preferable to any other meat. The beverage during this time should be whey, milk and water, and tea, equal care being taken to guard against malt or spirituous liquors, unless under particular cases of exhaustion, when a teaspoonful of brandy in a wineglass of water may be sometimes necessary.

After long privation, the gullet becomes contracted in one or more places, so as to prevent any sustenance passing into the stomach, in however liquid a form it may be given. In such a case as this, the patient would die unless artificially supported by injections of strong beef tea, arrowroot and a small quantity of brandy, or arrowroot and wine, or a mixture of eggs and milk and a little flour, thrown up the bowels by an enema syringe every three or four hours, or till the spasmodic contraction of the gullet passing off, allows of the entrance of food by the natural channel. When there is much restlessness, and where there has been long deprivation of sleep, a little opium should be given; but as all medicine is apt to nauseate the stomach at such a time, it should be given by the bowels, a suppository, composed of three grains of opium, being passed up the fundament for the purpose. See SUPPOSITORY. For the same object, and to overcome, the constriction of the gullet, when the alimentary injections are used, sixty drops of laudanum are to be mixed with one of the enemas, when the same results will be obtained. In all cases of long abstinence, as soon as it is necessary to act on the bowels, it will be found more advisable to do so in the first instance by means of an injection of Epsom salts, dissolved in warm water, than to risk the sickening of the stomach by nauseous medicines. It has been already said, that so great is the absorption in cases of long abstinence, that the action of the kidneys and bowels is nearly suspended; it sometimes happens, that during the recovery, for some days there is great pain felt in the region of the bladder, with extreme difficulty in voiding the contents. In such a case relief will be obtained by fomentations of hot water over the part; and if this should not afford a complete abatement, the following suppository should be passed up the bowels at bedtime, and a bottle of hot water placed between the patient's legs for the night. Take of—

Powdered camphor . . . 2 grains.
Powdered opium . . . 2 grains.

Mix into a mass with gum, and make into a suppository.

COMPULSORY ABSTINENCE is that restriction imposed by medical men on the dietary of a patient, as a means of cure in certain diseases occurring in constitutions of a peculiar temperament. The *antiphlogistic* regimen—as the course of dietary pursued in inflammations and fevers, and commonly known as "slops" —is an instance of compulsory abstinence to a certain extent. See HUNGER.

ACACIA.—A thorny tree of Egypt, the name of a genus of trees and shrubs belonging to the class *Polygamia*, order *Monæcia*, according to Linnæus; and by the Natural classification to the order *Leguminosæ*. Though the genus contains seventy-three species, there are only two that may be properly classed as medicinal; these are the *Acacia catechu*, and *Acacia vera*, or the gum arabic tree. For the first, see CATECHU.

ACACIA VERA, or gum arabic tree, is found indigenous in every region of the African continent, though the particular variety that yields the gum so universally required in greatest abundance, grows near the shores of the north and north-west of Africa, the Atlas range being the chief locality of this valuable gum, although large quantities *of a less pure article are obtained from the acacia of the woods* along the African rivers in Upper Egypt, Nubia, and Arabia; and though the best is now obtained from Morocco, large quantities are sent to Europe from Senegambia, Senegal, and other places. The properties of each are the same, the difference lying in the size and clearness of the tears, as they are called, or each individual exudation; that being considered the best and purest which is the most transparent, the whitest, and void of all colour—no matter whether the tears are small or large, or conglomerate.

Gum arabic is brittle, semi-transparent, and neither fusible nor volatile. It should be colourless, insipid, inodorous, and easily soluble in water, and more rapidly in hot than in cold; it is also soluble in the vegetable acids, but *insoluble* in alcohol, which, if added to a solution of gum, precipitates it in flakes; it is also insoluble in ether and all varieties of oil.

During the gum harvest, which usually endures for six weeks, the Arabs, who make incisions in the trees and collect the juice which exudes and hardens under the sun, live almost entirely on gum arabic; six ounces of the gum powdered, and mixed with a double proportion of flour, and then baked into biscuits, being considered abundant sustenance for one man, for twenty-four hours' aliment.

Apart from its extremely nutritive properties, gum arabic acts medicinally as a strengthening demulcent to support the system, and especially to shield the tender or abraded passages of the throat in cases of severe cold, cough, or consumption; and either in solution, when it is called *mucilage*, or sucked in its solid state, to afford relief in cases of irritating cough, where pieces of tenacious phlegm hang in the throat or round the *larynx*, or organ of voice, causing annoyance and irritation.

The only preparations of the acacia gum kept in the shops, are a thick solution of gum made in hot water, and known as *mucilage;* the powdered gum, *pulvis gumi acaciæ;* and the different kinds of lozenges, into which, with sugar, flour, or starch, and some essential oil or other medicament, it enters to form the *troches* of peppermint, ginger, or morphia.

ACCIDENTS are always sudden, and most frequently occur when least anticipated, and when the person who suffers the injury is entirely off his guard, and the mind incapable of self-reflection, or unable to discover what to do or what to advise. Such accidents as result from fire, water, or noxious gases, will be treated of under the heads of Burns and Scalds, Poisonous Exhalations, Drowning, Suspended Animation, &c.; and only those which refer to wounds, or violence applied to the body, will be considered under this head.

As the individual injured is seldom able to assist himself, there are certain properties which those who act the part of the Good Samaritan on such occasions should always be prepared to exercise, and without which the services rendered, however well-intentioned, may become more hurtful than beneficial; these are *energy*, *coolness*, and *decision*.

There are accidents of daily occurrence, where many valuable lives are either endangered or sacrificed, from the want of the most ordinary prudence and reflection; and for which, had it not been for the alarm consequent on the suddenness of the accident, or the fright occasioned by the appearance of the sufferer, a child, in many instances, might have devised a remedy. Nothing so materially tends to deprive a looker-on of his coolness and presence of mind, as the sight of blood exuding in any quantity from the body; and no accident, in general, can be more easily relieved. The friendly assistant should never forget, that every moment he delays to stop the crimson tide, while casting about for suitable means, may be fatal to the sufferer; whereas the point of his *finger* is a means always ready, and when only a single vessel is injured, the pressure of that small member is sufficient to suspend all bleeding from the artery or vein.

In case of an accident involving insensibility or great bodily suffering, the first duty is to remove any weight or encumbrance from the body, and then lay it gently on the back, in such a position that the air may have free access to the sufferer, especially about the face and neck. All unnecessary examination, or moving of the person, should be avoided till some professional gentleman arrive to take the responsibility of the case. Should a bone be broken, and the fractured extremities protrude through the flesh, any attempt at reduction or setting the bone, before the arrival of the surgeon, would be highly culpable; if, however, there is any violent bleeding, it should be at once arrested. If the bleeding proceeds from the leg or arm, the seam of that part of the coat or trousers should be ripped up with a penknife, so as to expose the limb *without disturbing it; the point from whence the blood issues* is then to be sought for, *a finger immediately placed on the spot where the open vessel is bleeding*, and a gentle pressure established, but merely sufficient to arrest the discharge; in the mean time, a large handkerchief is to be folded in its longest direction, so as to make a kind of broad bandage, which must then be passed round the limb, *above* the wound, and also the fracture, and tied tightly; the finger is then to be removed from the wound, and if there be no further bleeding, the limb may be left alone till professionally attended; but should the blood still flow, though in diminished quantity, the bandage must be made still tighter by inserting a piece of stick under the last fold, and by giving it a few turns, compress the artery more effectually.

Arterial blood is always known by its bright scarlet colour, and by its springing out in leaps or jerks; while *venous* blood is characterized by its dark purple colour, and by its flowing steadily like water. The bleeding having been suppressed, the face may be bathed with cold water, and if there is great exhaustion, a small quantity of brandy and water administered occasionally.

In cases of collision, where the person has been violently shaken, and there is no external injury, only insensibility, attended with pale face, livid lips, cold hands and lower extremities, the body should be placed in a horizontal position, the head slightly raised, and bottles of hot water or heated bricks applied to the feet, legs, and inside of the thighs, and small quantities of warm brandy and water given every few minutes; at the same time, ammonia or smelling salts should be applied, but cautiously, to the nostrils. When the insensibility is attended with abrasion, laceration, or wounds of the head, the same means are to be adopted, the injuries washed with a sponge and cold water, so as to remove all dirt that may be present. The edges of the cut or lacerated part are to be next brought together, and secured by strips of adhesive plaster, and a light bandage passed over all. See HEAD, INJURIES OF; WOUNDS, CONTUSIONS, &c.

ACCIDENTS, PRECAUTIONS AGAINST.—It would be a reflection on the reader's understanding, and take up too large a space in our work, to set down all the precautions that it behoves a person possessed of ordinary prudence to adopt, to guard against *avoidable* accidents, as every one must know that going too near the verge of a precipice, throwing orange-peel on the pavement, leaving a room with a poker in the fire, or scattering lucifer matches about for children to suck, or to be ignited by the tread of the foot, are all self-evident and objectionable, as probable causes of accident. Still there are some precautions that may not be so generally apparent, but which should be equally known, and which we propose to generalize, *first*, into those against accidents by lightning.

Here it should be universally known, that as lightning is only a concentrated and infinitely powerful species of electricity, the same laws that govern the latter influence the former: thus water, vegetables, and metals, are all strong conductors of electricity, or, in other words, attract it; so also are they conductors of lightning. On this account it is highly dangerous to take shelter during a thunderstorm under a tree of any description, whatever the ancients may say to the contrary about the laurel. Equally objectionable is it to stand under a cart lodge, or any out-building, where lead or zinc is used for the roofing; for the same reason it is dangerous to run under a portico, or eaves, where there are drain pipes to convey the water from the roof. The banks of lakes, rivers, and large pools of water, should for the same reason be avoided; and an umbrella, especially if it have a metal ferule, is, during a thunderstorm, the most dangerous shelter of all, being little less than a lightning conductor. It is much safer, if overtaken by a thunderstorm, and where no house is near in which protection can be obtained, to endure the wet, button the coat over the watch-chain, close the umbrella, cover the ferule with mud, and having removed all metallic surfaces, take the middle of the road, and at a brisk walk boldly encounter the rain. Even in the best built house it is necessary to take precautions against lightning during a storm. The window, as soon as the panes become wet, is dangerous, as glass then is a conductor. The fireplace, on account of the chimney and the grate below, is also a situation to be avoided; so is the neighbourhood of the bell handles and bell wires; and the doors, on account of their bright knobs. The safest part of a room is the centre, the fire-irons being covered over, and all metallic substances removed from around the space: the bed, when detached from the wall, and destitute of metallic rings, is, on account of the non-conducting property of the feathers, the safest part of the whole house.

Second, against accidents by water.

However meritorious may be the action, no person is justified in plunging into the water, to save another from drowning, unless he can swim; and even then he should defer his efforts till partial insensibility occurs, for unless the swimmer gets behind the person, and keeps himself clear of the convulsive clutch with which the drowning man grasps his preserver, the chances are that both may sink together. See DROWNING.

In bathing, unless a good swimmer, the person should never go out of his depth; he should at all times avoid bathing in holes, and if in lakes or rivers, whenever he finds the water particularly cold—as it is near the springs, he should at once place himself beyond their reach, and on the first sensation of cramp, make for the shore.

In sailing in a small boat, whether propelled by sails or oars, the centre of gravity is always to be kept *low;* the person should never rise from his seat unless to land; more fatal accidents occur on the water from the neglect of this rule, than from any other kind of casualty. When two or three persons suddenly rise up in a boat, it is almost certain to be overset, and every one in it flung into the water. With regard to skating, no ice should be ventured on till after three days' continuous frost, and not then if the edges appear rotten, or can be pierced with a walking-stick; the person who would attempt to skate after a fall of rain, or when water lies on the ice, does so in open violation of the commonest rules of prudence.

Third, against accidents from fire.

If disturbed in the night by an alarm of fire, the person should avoid opening doors and windows: if he has to pass into other rooms to rouse and collect his family, he should close the door behind him, so as to prevent all draughts and strong currents of air. The best protection any one can have in such a situation is a blanket: with a pair of shoes on the feet, a person enveloped all but the eyes in a blanket, may pass in safety through a volume of smoke and a degree of heat that could not be effected in any other dress; the blanket being carefully held before the mouth, enables the individual to breathe with a freedom that would be impossible without such a protection. If there is water in the room, and much flame to be passed, the blanket should be first wetted, particularly the part over the head and mouth. If all escape by the stairs is cut off, the sheets of the bed should be knotted together into a rope, and one end having been secured to the bedpost, an attempt must be made to descend from the window by the other. In cases where much smoke has to be encountered, a silk handkerchief wetted in water should be passed double across the mouth, or thrown over the head and fastened round the neck like a mask. For more particular means of escape from such an accident, see FIRE. As a precaution against many accidents from fire occurring in houses, a guard should invariably be placed before the grate in rooms where children are allowed to play. In cooking, or filling a lamp, if the grease of the one, or the oil of the other, should take fire, the flame should on no account be attempted to be blown out, or the face may be very seriously scorched; and as cold water only increases the mischief, if the flame cannot be extinguished by a plate, a meat cover, or any other object at hand that will smother the fire, it had better be allowed to burn out, for as soon as the unctuous matter or the spirit is consumed, the ordinary combustion will be easily extinguished.

Though all that appertains to this subject will be fully entered into under its proper head, there is one point that cannot be too often repeated, namely, that as ladies' dresses are by their texture extremely liable to take fire, and such accidents are unfortunately very frequent, when they do occur, the table-cover, the curtains from the window, the hearth-rug, or a coat, should be instantly wrapped round the sufferer, who should on no account be allowed to escape, even if she has to be thrown on the ground, and rolled on the carpet.

ACCLIMATIZATION.—The annealing of the system, and inuring of the body to a new climate and soil. The period requisite to accustom a stranger to the influences of a fresh atmosphere, and the peculiarities of a new region, differs materially with different constitutions; some persons will become seasoned to a foreign clime in a year, while others, though they may spend half a lifetime in the same locality, seem never thoroughly naturalized to the climate. Till the system becomes reconciled to the change, the body will always be subject to the diseases, vicissitudes, and meteorological peculiarities of the country. See CLIMATE.

ACCOUCHEUR.—The French name for a man midwife. An obstetric surgeon; a professional man who attends women in their confinements.

ACCUBATION, from *accubo, to sit at table, or to lie down;* an ancient posture practised by the Greeks and Romans at their meals, which represented a position half sitting, half reclining, and one considered by the ancients as highly conducive to comfort and digestion. See DINNER and TRICLINIUM.

ACETABULUM.—A Latin word signifying a saucer, a cup, or any small shallow vessel; anatomically, the word is employed to express the concavity in the hip or huckle bone, in which the head of the thigh bone or *femur* is articulated, making what is called the Hip Joint, which see. Also the name of a plant, formerly used in medicine for the same purpose as dandelion, to act on the kidneys. The common name was navelwort; it is now, however, entirely expunged from the list of medical plants.

ACETATES.—The name given to a number of very useful medicinal salts. Acetates are a combination of vinegar, *acetum*, and alkalies, earths, and the oxides of metals. For the name, properties, and doses of these salts, see POTASS, SODA, AMMONIA, LEAD, &c.

ACETOSELLA.—The botanical name of the sorrel plant, several species of which are indigenous to this country, from one of which is obtained the *sal acetosella* which, when powdered and mixed with cream of tartar, is sold as salts of lemon; and from another is procured that irritant poison known as oxalic acid. See SORREL.

ACETUM.—Vinegar. There are two varieties of this universally known article in general use: 1st, the common brown vinegar, the produce of fermentation, and obtained from any vegetable solution containing sugar, as infusion of malt, cider, wine lees, &c. The vinegar used in this country is obtained by fermenting wort made of malt; and 2nd, the white or distilled vinegar, a clear, colourless acid, procured from the destructive distillation of certain kinds of wood, and known in the shops as Wood Vinegar, or Pyroligneous Acid, which see. Acetic acid, or vinegar, is extensively used in medicine, both as an external application with water, and internally as a refrigerant in fevers, and as an astringent in cases of internal bleeding, when it may be given in doses varying from a teaspoonful to a tablespoonful, every two or three hours. Acetic acid is largely used as a condiment to food, for pickling fruits and vegetables, and preserving meat and fish. It is also employed as a disinfectant, to sprinkle sick-rooms; but this is an error: though it gives off a refreshing odour, it has no power to correct fœtid air. Acetic acid enters into the preparation of the vinegar of squills, colchicum, capsicum, and the vinegar of honey, *oxymel.*

The ordinary brown vinegar only contains some five or six parts of pure acetic acid to 100 parts of water. When this vinegar is distilled, the pure acid obtained is so potent, that if rubbed on any part of the body it will instantly raise a blister. Strong acetic acid, when mixed with some camphor and a few of the essential oils, becomes the Aromatic Vinegar so highly esteemed for its pungent and refreshing properties. See VINEGAR.

ACHILLES TENDO.—The tendon Achilles is the long narrow sinew which, descending from the muscles of the calf to be inserted in the bone of the heel, can be always easily observed; and as it is the lever to the chief extensor muscle of the leg, it becomes an object of great importance both in the support and the progression of the body. The ancients gave it the name it bears from the fable that Thetis held the boy Achilles by this part of his foot, while she dipped the rest of his body in the river Styx, to make him invulnerable; and because, afterwards, it was through this part that the javelin of Paris wounded the renowned hero. From the situation and importance of this tendon, any accident to it demands immediate attention, and as that to which it is liable is generally of one character, there can be no difficulty in at once recognizing it. The accident to which the tendon Achilles is most subject is a rupture, or breaking across of its fibres.

CAUSE. — Considering the general strength of this tendon, the causes that rupture it seem quite inadequate to effect such a result; these are a false step, the sudden twisting of the ankle, a leap from a moderate height, or even the throwing out of the foot, as in dancing, or in attempting to kick some obstruction from the way.

SYMPTOMS.—The moment the accident has happened, the person hears a snap like the crack of a whip, and feels so sudden an incapacity to move or stand, that he almost invariably falls instantly to the ground, and is totally incapable of getting up again without assistance. On examination, a very evident depression is seen and felt in the seat of the accident, and which is greatly increased when the foot is bent upwards towards the leg, or, as it is called, *flexed;* and proportionately diminished when the foot is *extended,* or bent downwards.

TREATMENT.—As it is *very seldom that swelling results from such an accident,* the treatment may be commenced at once. As in a simply fractured bone, all that is necessary in this case is to bring the two edges of the broken tendon in close connection, and confine the limb in such a position as shall insure their remaining so till a reunion takes place, and the tendon recovers its natural strength. To effect this object, a strong slipper, either of list, or one of the American overshoes, must be procured to fit the foot; one end of a strap of sufficient length is to be firmly sewed to the upper part of the heel of the slipper; a tolerably broad piece of girthing, lined with wash-leather, to prevent its chafing the skin, is to be passed round the thigh, and firmly fastened by a couple of small buckles, having a loose buckle attached to the part of the girth *below* the thigh; through this buckle, the other end of the strap from the slipper is to be passed, and while an assistant presses down the tendon from above, and by bending the foot downwards, brings the two edges in close connection, the strap is to be buckled at that point, so as to keep the limb bent at an angle of forty-five degrees. In this position the leg and foot are to be kept till the cure is effected, which will generally take from ten to twelve weeks to insure. The new matter thrown out to effect the union will leave a small swelling over the seat of the accident, but this, in time, will be reabsorbed, and the tendon regain its original appearance. It is not necessary for the patient to be confined either to the bed or the house during this tedious process. Out-of-door exercise may be taken by the use of crutches, and, after the sixth or seventh week, the strap may be a little relaxed once or twice a day, for the patient to gently move his ankle. When the union seems sufficiently perfect to allow of the removal of the slipper, the first shoe worn should be made with a heel at least an inch higher than the other shoe, so as to avoid stretching the tendon too much at first.

ACIDS.—An important class of medicines, characterized by a sharp, sour taste, leaving a sense of astringency in the mouth. Chemically, acids are distinguished by their power of converting vegetable blues into reds, and, in combination with an alkali, forming salt. There are three kinds of acids—animal, vegetable, and mineral; as the first kind, however, is never used medicinally, we shall only consider the two last. Vegetable acids are either fluid or solid, and possess cooling and refreshing properties. The most important of this class of acids are, acetic acid, common vinegar; pyroligneous acid, or wood vinegar; citric acid, tartaric acid, oxalic acid, and hydrocyanic acid; benzoic acid, though belonging to this class, is generally considered among the resins. As these acids are usually given in combination with some neutralizing substance, the dose of each must depend upon the amount of alkali given with it, except Hydrocyanic Acid and Vinegar, which see. Mineral acids:—These acids possess very different properties from those of the vegetable class, being astringent, stimulating, and tonic, while, in an over-dose, they are powerful irritants, and, in excess, become corrosive irritant poisons. The mineral acids of chief importance are, —sulphuric acid, or *vitriol;* the dose of which, in a diluted form, is from three to ten drops: muriatic acid, or *spirits of salt;* dose, from two to seven drops: nitric acid, or *aqua fortis;* dose, from two to five drops: nitro-muriatic acid, a mixed acid, composed of one proportion of nitric, and two proportions of muriatic acid, and chiefly used in fevers and ague; dose, from three to seven drops.

All these mineral acids are used, in combination with astringent decoctions, as gargles for certain conditions of sore or ulcerated throat, while the nitric is frequently employed to destroy foul or malignant growths. See the several acids named, GARGLE, and ELIXIR OF VITRIOL.

ACIDITY OF THE STOMACH.—Some persons, whose digestive powers are naturally weak, or whose stomachs have been made so by injudicious living, long illness, or by strong and improper medicines, are so unfortunate that everything they eat seems to resolve itself into an irritating and corroding acid, and that, too, however carefully they may live.

CAUSES.—Though the above are frequently the remote causes of this distressing malady, a long sedentary occupation, mental anxiety, an habitual constipation of the bowels, a vegetable diet long persevered in, and the injudicious habit of swallowing the food before being completely masticated, are among the most general and immediate causes of acidity of the stomach.

SYMPTOMS.—Want of appetite, languor, loss of energy, distention of the stomach —especially after meals, sour eructations or belchings, a sense of heat, or wringing pain in the pit of the stomach, with a *sinking feeling soon after taking* food.

Sometimes these symptoms are attended with nausea, and fits of severe headache; the bowels are either obstinately confined, or relaxed even to diarrhœa; the skin is often dry and hot; the water throws down a sediment, either red or white, and the tongue is usually coated behind, and red in front.

TREATMENT.—The duty of a conscientious medical man is not to cure a disease by physic, but to cure it by the best and the simplest means within his reach, no matter by what name the agents are called by which he effects it. In cases of acidity of the stomach, *diet* and *regimen* will, in many cases, be found more beneficial than any course of medicine whatever. The patient should endeavour to discover the primary cause of his ailment,—what, in fact, has weakened his stomach,—and, in future, carefully avoid the article or cause that has produced it. The next stage in the treatment is to endeavour to strengthen the stomach—not by medicine, *but by food.* For this purpose, he must chew every substance put in the mouth long and thoroughly, never allowing a morsel to pass the gullet *till completely ground and intimately mixed with an abundance of saliva;* he should avoid all farinaceous foods, puddings, broths, vegetables, and, for a time, even potatoes; the dinner should consist of only meat and bread; very little drink should be taken with the meal, merely a sip now and then to excite the flow of the saliva; plain water, or water with a few spoonfuls of brandy, is the best beverage for the purpose. The stomach should receive a little food every four hours, and half a biscuit will be quite sufficient for the purpose. At the other meals, dry toast, or biscuits, with a moderate amount of tea or coffee, must suffice for tea and breakfast, till the stomach has recovered its tone, and a return to an ordinary diet may be commenced. At the same time that the patient is pursuing the above dietary, he should sponge his shoulders and chest with cold vinegar and water every morning, and afterwards use the flesh-brush over all the parts wetted for at least five or ten minutes. A steady perseverance in such a course of treatment for two or three weeks will not only give tone and strength to the stomach, but add materially to the health of the body.

When a course of medicine is preferred to a dietetic plan, the treatment must commence with an attempt to carry off the acidity by the bowels, for which purpose the following pills are to be employed. Take of—

Compound rhubarb pill,
and blue pill, of each . 15 grains.

Mix, and divide into six pills.

If the bowels are constipated, two pills should be taken at bed-time for two nights; if the bowels are not confined, one pill is to be taken for two nights, while every day, an hour before dinner, the patient should take one of the corrective pills prescribed below. Take of—

Dried carbonate of soda. 20 grains.
Powdered rhubarb . . 6 grains.
Ginger . . . . . . 4 grains.

Extract of gentian sufficient to make into a mass. Divide into six pills.

An aperient pill may be taken afterwards twice a week, to ensure the action of the bowels, and these means persisted in for some time. The result will be still more satisfactory, if the advice already given as respects diet, &c., is joined to the course of medicine.

A teaspoonful of magnesia, or half a teaspoonful of carbonate of soda, or of potass, taken in a wineglassful of plain or peppermint water, will, in trifling cases of acidity, afford immediate relief. For females, during pregnancy, the carbonate of magnesia in lump will be found the most suitable article they can take for the acidity to which they are so subject, especially if it is chewed.

When magnesia fails to afford relief, considerable benefit is frequently obtained by eating a little dry rice. See HEARTBURN and INDIGESTION.

ACIDULATED DRINKS.— Though lemonade and sherbet are considered the chief of these grateful and refreshing beverages, several other agreeable drinks may be made from any of the mineral acids with syrup and water, each of them possessing highly medicinal qualities, especially in cases of fever and spitting of blood. The following is a list of some of the most approved:—

No. 1. To a quart of cold boiled water, add—

Red elixir of vitriol . 2 drachms.
Simple syrup . . . . . 2 ounces.

Mix.

No. 2. To a quart of cold boiled water, add—

Diluted sulphuric acid . 1½ drachms.
Syrup of orange . . . 2 ounces.

Mix.

No. 3. To the same amount of water, add—

Diluted nitric acid . . 1½ drachms.
Syrup of roses . . . 1½ ounces.

Mix: about a wineglassful of each may be taken at a time; but as the acid would act on the teeth if drank, each quantity should be sucked through a quill, so as to prevent the liquid from coming in contact with the teeth.

No. 4. To a quart of thin barley water, add the juice of two oranges and one lemon, with enough sugar to make it palatable.

No. 5. Boil four ounces of tamarinds in three pints of water for half an hour, add a few spoonfuls of sugar, strain, and when cold give from a wineglass to a cupful, whenever the thirst is troublesome, either in hectic or ordinary fevers.

No. 6. Dissolve a teaspoonful of cream of tartar in a quart of boiling water, stir frequently, add simple syrup, one ounce; strain, and when cold, a light refreshing drink will be obtained, equally agreeable in health and sickness.

ACIDULATED DROPS.—A confection, made of the finest lump sugar and tartaric acid; divided into circular lozenges, and forming an agreeable sweetmeat in cases of thirst and fever.

ACINI.—A name given by anatomists to small granular-looking bodies, the terminal branches of minute vessels, found in the substance of the liver and kidneys, and so called from their fancied resemblance to a grape-stone, *acinus*.

ACNE.—An eruptive disease of the skin, chiefly affecting the face and forehead, and named from a Greek word, signifying the top or acme of anything.

The origin of this disease is in those minute cavities of the cuticle which secrete the oily matter which lubricates and protects the surface of the skin, and are called *sebaceous follicles*. Youths at the age of puberty are very subject to this pimply eruption of the face, which, on account of the very small opening in each, and the thick matter within, are difficult to eradicate.

The best *treatment* is an occasional dose of sulphur, about a drachm every third morning for a few times, followed by a dose of Epsom salts; and two days after, a hot or Turkish bath. There are other forms of this disease occurring at later periods of life, which will be treated of under Diseases of the Skin, which see.

ACONITE.—The botanical name of the Monk's-hood, a medicinal herb of narcotic properties, and extremely poisonous. See MONK'S-HOOD.

ACORN.—The well-known fruit of the oak tree. On account of the large amount of *farina* they contain, acorns are greatly prized as a food for cattle, pigs particularly thriving on them. In years of scarcity, acorns have been frequently used for human sustenance, and with chestnuts, still form a part of the diet among the poor in the north of Europe. The bitter, astringent taste of the acorn, is the great drawback to its usefulness: this, however, is in a great measure destroyed by beating the kernel into a paste, and allowing the mass to lie for twenty or thirty hours in water; it is then to be dried, and reduced to powder. This flour can either be used alone, made into a dough in the usual way, and baked in thin cakes, or it may be mixed with a little wheaten flour, or meal, and formed into bread. See FOOD.

ACORUS CALAMUS.—The botanical name of the well-known plant, the Sweet Flag, which see.

ACOTYLEDON, without a cotyledon; or a seed not furnished with a perishable lobe.—The word is derived from the Greek, and signifies a small lobe attached to the embryo or germinating principle of a plant, for its protection and nutriment.

The seeds of some plants have only one, others two lobes or cotyledons, and others are destitute of them altogether, when the plant is called *acotyledonous;* the peculiarity forming a class according to the Natural system of Jussieu, and agreeing with the *Cryptogamia* of Linnæus.

ACOUSTICS, from the Greek "to hear," the science that treats of sound; a knowledge of the origin and principles of hearing. Any medicine or instrument employed to assist or cure a defective hearing, is so named.

The speaking-trumpet, the soundboard over the pulpit, the arch above the proscenium of a theatre, or any contrivance that collects sound, and throws it in a concentrated form on the *tympanum* of one, or the ears of many, is denominated an *acoustic.* See HEARING, SPEAKING-TRUMPET, and SOUND.

ACRATIA.—A word formerly used by medical men to express a want of physical firmness, strength, and stamina in a patient; or, as it would be modernly understood, a state of general relaxation, and loss of bodily energy.

ACRID.—A term almost synonymous with acid; the presence of any sour, hot, and excessively irritating substance in the stomach, is so called, when it exceeds the usual symptoms excited by the presence of mere acidity. An acrimonious agent *is such a substance as,* when applied to the skin, will irritate and inflame it, and when taken into the stomach, superinduce pain, heat, and nausea. See ACIDITY.

ACRODYNIA.—The name of a remarkable epidemic disease, which was characterized by an extremely painful affection of the wrists and ankles, and made its appearance in Paris between the years 1829 and 1830.

ACROMION.—The name of the large projection or process of the shoulder-blade, or *scapula,* which overhangs and protects the shoulder joint. It is so called from being the extreme point of the shoulder.

ACTION.—By this term is meant the peculiar operation that any individual or class of medicines exercises upon the system; thus, all aperient or purgative medicines have a *downward* action, the various organs on which they operate being induced to propel their secretions to the lowest part of the abdomen. Emetics, on the contrary, have an *upward* action, and stimulate the organs on which they have power, to eject their contents upwards. Some medicines have an action directly on the skin, and, by exciting the excretory ducts, unload the oppressed system by pouring out the obstructing impurities by a copious perspiration.

Others, again, show their action by stimulating the kidneys, or the vessels of the chest and throat; and so on with all others. The actions of organs and parts constitute the functions of the body, and will be found under that head.

The action of medicines may be facilitated, and their efficacy increased, by inducing contrary effects in the system; thus, when it is of consequence to impress the body quickly with a certain drug, or to produce a sudden effect by the means of that drug; the abstraction of a few ounces of blood, the exhibition of a small dose of tartar emetic or ipecacuanha, or the employment of tobacco smoke, will produce either of the results desired. In the same way, a teaspoonful of Epsom salts, dissolved in a large quantity of water, or ten grains of jalap, intimately mixed with thirty grains of cream of tartar, will produce the effect of four spoonfuls of the one, or forty grains of the other. See MEDICINES, ACTION OF.

ACTUAL CAUTERY, or real cautery. —In surgery there are two kinds of cautery, the *actual* and *potential:* the former implies the application of a white or intense heat to the body, generally in the part immediately over the seat of the disease; the object sought being, by the instant and extensive destruction of the cuticle, by the contact of fire, and the effect of the violent inflammation that must follow, to excite a healthy action in the diseased part. The means by which the actual cautery is usually applied, is by small pointed irons, heated in a strong fire till they become completely of a *white* heat. For the mode of application,' see Spine, Diseases of; Hip Joint, Diseases of; and White Swelling.

Potential cauteries are chemical or other substances, which, applied to the skin, produce the same effect as the actual, though not so rapidly, and are powerful corrosive substances, which destroy the tissues to which they are applied, and generally require to be repeated.

Among the potential cauteries the most important are—lunar caustic, *nitras argenti;* fused potass, *potassa fusa;* and burning cotton, *moxa*.

ACUPUNCTURE, or ACUPUNCTURATION, from "a needle," and "to prick with." A very painful mode of curing certain chronic diseases by puncturing the part freely by one or a series of sharp, strong needles, extensively practised by the Chinese, Japanese, and other Oriental nations, and first introduced into Europe by the Dutch, about the middle of the 17th century, and, like all new fashions in medicine, was, for a time, extensively adopted.

The only difference in the practice consisted in the Eastern surgeons using pure gold for their needles, while the Europeans employed those made of steel. Each needle, from 8 to 10 inches long, is inserted into a small handle, and introduced into the flesh with a slight rotatory motion, for the depth of from half an inch to two inches, and is left protruding from the part for several minutes, and sometimes for hours. In this country, acupuncture was chiefly used in chronic affections of the joints, muscles, and tendons, and diffused dropsy of the body; but among the Asiatics it was employed in all diseases, and applied to every part of the body. The practice is now almost abolished from English surgery.

ACUTE.—A term applied in medicine to signify such diseases as are characterized by severe, painful, and active symptoms, and which have a tendency to come to a height and run their course in a limited time; the first stage of a disease, and opposed to *chronic*, which is a *slow, apathetic form, and into which a disease,* having passed through the first and second stage, the *acute* and *sub-acute*, is, if not cured, certain to settle. All inflammations, fevers, &c., are acute; enlargements of an organ, and rheumatism when long standing, are examples of chronic affections.

ADAM'S APPLE.—The protuberance in the forepart of the neck, formed by the junction of the thyroid cartilage, or shield to the organ of voice; and so called from a vulgar belief that Adam's share of the forbidden fruit stuck in his throat, and left this mark of his transgression to all his posterity. It is much larger in the male than female, in consequence of the organ of voice being larger in the man than woman.

ADAMSONIA, or ADANSONIA.—The baobab tree, Ethiopian sour-gourd, or monkey's bread tree; a huge tree, a native of Africa, and one of the largest species of vegetation of tropical regions. Its altitude varies considerably, but its girth is seldom less than seventy feet in circumference.

The natives use the bark, which they call *lulo*, as a febrifuge, being also supposed to possess tonic and diaphoretic properties. Where Peruvian bark, or quinine, cannot be procured, the bark of the baobab tree may be substituted with benefit, in which case it must be given in the form of decoction; one ounce of the bruised bark being boiled in a pint of water for ten minutes, strained, and when cold, two tablespoonfuls taken every four or six hours.

ADDER, Bite of.—Though extremely venomous, the bite of the adder in this country is seldom attended with fatal consequences; in weak and unhealthy constitutions, however, very serious results may follow such an accident, especially where the mind is greatly depressed by apprehension of the consequences.

Symptoms.—In all cases of bites, the infliction of the wound is followed by immediate pain, more or less acute, discoloration of the part, a feeling of nausea, sometimes followed by sickness and fainting, pain in the back and neck, oppression at the chest, difficulty of breathing, extreme prostration of strength, and occasionally spasms, and that lethargic sleep known as *coma*.

As the most venomous poison of the reptile tribe is perfectly *harmless* unless carried by absorption into the blood, the first object in the *treatment* should be to *prevent* the possibility of the venom being conveyed from the part bitten to the heart.

For this purpose a piece of tape or string should be immediately tied tightly round the member or limb, directly *above* the wound, and between it and the heart; the bite must then be washed with warm water, and if the mouth and lips of the operator are free from cracks and chaps, the mouth should be applied to the wound, and the bite carefully and steadily sucked, the operator pausing from time to time to spit out the exudation, and wash his mouth.

The wound is to be again washed with fresh water, and both the punctures and the surrounding part freely cauterized with lunar caustic. In cases where the friend or surgeon entertains a repugnance to sucking the wound, or, from sores in the mouth, the undertaking would be hazardous, the puncture should be instantly washed with two or three quantities of warm water in quick succession, and then thoroughly wetted with liquid hartshorn, till pain is excited in the part; lunar caustic is next to be applied freely, and lastly a wet cloth laid over the wound. Where cupping glasses can be obtained, and the bite has not been sucked, they should be applied, and on their removal the caustic rubbed *over and into the wound*, the inflammation consequent on the use of the caustic being assuaged by the application of cloths dipped in warm water. For the means and method of extemporizing cupping glasses, see CUPPING. Sometimes the bite is so venomous, that the constitution suffers very severely; the fainting, loss of bodily strength, difficulty of breathing, and mental anxiety, being both excessive and alarming. These, however, become of less importance in proportion to the quickness and efficiency with which the local remedies have been employed. For the pains in the back, and oppression of the chest, electricity, if convenient, should be adopted; if not, these and the other symptoms must be treated by giving frequent doses of the subjoined mixture, the application of hot water to the feet, and rubbing the spine with the following embrocation:—

Mixture.—Take of—

Carbonate of ammonia .	½ drachm.
Aromatic confection . .	1 drachm.

Mix in—

Camphor water . .	5 ounces,

and add—

Tincture of valerian and tincture of lavender, of each	2 drachms.
Spirits of ether . . .	1 drachm.

Mix. Take one tablespoonful every half-hour, and a small quantity of hot brandy and water between each dose.

Embrocation.—Take of—

Compound camphor liniment, and turpentine, of each	½ ounce.

Mix; and rub it into the spine for five minutes every one or two hours.

In some places, it is customary, on the receipt of a bite from an adder or venomous serpent, to kill a fowl, cut it in two, and apply one of the halves hot to the part, the popular belief being that the heat of the divided fowl has the property of absorbing or drawing out all the venom left in the wound. The Indian remedy to prevent absorption, and resist the stage of depression and collapse, is to drink a bottle of Madeira in two doses, with only an interval of five minutes between each quantity. See BITES and STINGS.

ADDER'S TONGUE.—A common and familiar plant, growing extensively in England in meadow-lands; a species of fern—the *Ophioglossum vulgatum*. Adder's tongue is so called from its small, narrow green leaves, whose pointed tips, peeping out of the surrounding grass, give them a fanciful resemblance to the tongues of adders.

The leaves of the plant are a very old and popular remedy in many internal disorders, and, in combination with the juices of other plants, are made into a cerate, which, under the name of May Ointment, was, and still is, held in high esteem in all ill-conditioned wounds, bites, stings, tumours, and bruises.

ADDITAMENTUM.—Anything added to a part or ingredients: in anatomy, the word is applied to the junction or *suture* of the temporal, with the side or *parietal*, bones of the skull.

ADEPHAGEA.—An obsolete medical term, signifying a gluttonous or voracious appetite.

ADEPS.—A Latin word, signifying fat, tallow, or animal grease; but in pharmacy, or the compounding of medicine, used only to signify Hog's Lard, which see.

ADHESIVE INFLAMMATION.—A term in surgery used to express that kind of inflammatory action by which two parts adhere and grow together. That process by which any clean cut—when the edges are drawn together—unites without suppuration. See HEALING BY THE FIRST INTENTION.

ADHESIVE PLASTER, diachylon, strapping, or sticking-plaster.—This very useful article is made by melting lard, wax, resin, and litharge of lead, and, when thoroughly mixed, spreading it by means of machinery on lengths of calico or linen, the latter being regarded as the best. Another kind of sticking-plaster is made with balsamic and aromatic resins, spread on black silk, and, being a more elegant preparation, is called Court Plaster, which see. As these adhesive plasters possess no healing or medicinal virtues whatever, and simply act mechanically to keep the lips of wounds and cuts together till the process of adhesive inflammation unites them, or to save from dirt and accident open sores, that article is the best which holds firmest, and will not yield with the heat of the body.

ADIANTUM.—The botanical name of the common indigenous plant called Maidenhair, which see.

ADIPOCERE.—Fat and wax. A peculiar fatty matter, of a soapy feel, like soft spermaceti; found in the coffins, and adhering to the bodies of persons buried in a peculiar place, or under unusual circumstances. A state into which the animal solids—especially muscular fibre—are liable to pass, when buried under certain conditions. The existence of this fatty, soapy, and adhesive substance was first discovered in 1789, on opening some trenches in a cemetery at Paris, where numbers of persons had been interred some fifteen or twenty years before. On opening those coffins which still remained entire, the bodies within were found shrunk and flattened, as if pressed by a great weight; all the soft parts were converted into a brittle, cheesy substance, tenacious and unctuous to the feel. The bones had become brittle, and the *viscera*, or internal organs, were no longer discernible, but the places they should have occupied were filled up by lumps and masses of a whitish, glistening, fatty substance, like impure spermaceti, to which the name of *adipocere* was given. Recent experiments have shown that healthy animal fibre can be artificially converted into this peculiar substance; for if a mass of fresh beef be secured in the current of a running stream for three or four weeks, the whole of it will be changed into that fatty, waxy, and friable substance known as adipocere; even tallow, exposed to the same influence, has its properties equally changed.

ADIPOSE TISSUE OR MEMBRANE.—An organic animal tissue, composed of innumerable cells, or pockets, as they are sometimes called, in which the fat of the body is contained in a semi-fluid state during life, but becoming hard and concrete after death.

Though universally diffused over the body, between the muscles and the skin, it is more abundant and thicker in some localities than in others: thus, on the *nates*, or buttocks, it forms a deep and elastic cushion; lines with a thick coat the muscles of the abdomen, and invests the organs of that cavity with an abundant covering. It is the presence of this fatty membrane that gives the full-grown healthy body that symmetrical roundness and harmonious contour so beautiful to observe in the human figure. As a person advances in life, the amount of the adipose tissue increases up to a certain age, after which it becomes absorbed, and the attenuation that usually accompanies senility takes place. In cases of fever, long illness, or deprivation from food, it is the adipose tissue that first suffers, the absorbent vessels becoming so active, that in a few days a full-bodied, and even corpulent man or woman, will be reduced to merely skin and muscle.

The disease known as *atrophy*, or *mirasmus*, a partial or general wasting of the body, is the result of the action of the absorbents on the adipose tissue. See ABSORPTION.

The adipose tissue is subject, like the other tissues of the body, to diseases of various kinds. Thus, an unnatural deposition of fatty matter around any particular organ, by preventing the natural action or function of the structure, as in the case of the heart, may lead to hypertrophy. The morbid deposition of this fatty membrane is sometimes equally spread over the whole body, causing that unwieldy appearance known as obesity. Persons under this encumbrance of fat have been known to weigh 600 pounds. Adipose tissue is also liable to inflammation, and a state of fœtid suppuration and sloughing. See CARBUNCLE. But the most frequent diseased action to which it is liable is that of fatty tumours, *adipose sarcoma* and *steatomatous tumours* (see TUMOURS); and, lastly, a discoloration, as if a series of ink spots had been scattered over the membrane, and known as *melanoid* depositions.

ADNATA TUNICA.—In anatomy, one of the coats of the eye, sometimes called the *conjunctiva;* the white portion of the organ of vision. See EYE, WHITE OF, and OPHTHALMIA.

ADOLESCENCE.—A medical term, derived from the Latin verb adolesco, to grow, and employed to signify the age succeeding childhood, and extending to the period of confirmed adult life. In the male, adolescence, or puberty, commences generally at the age of fourteen, and terminates at that of twenty-four; and in the female, at thirteen, terminating at twenty-one years of age. See PUBERTY, ADULT.

ADRAGANTH.—Gum-dragon, an inferior kind of Gum-tragacanth, which see.

ADULT.—A medical term to signify grown up, or arrived at the age of discretion and maturity. Adult age in the male is regarded as that period of life between fourteen and twenty-one years, and in females from fifteen to twenty years of age.

ADULTERATION.—The serious evils to which the social vice of adulteration has led, are too numerous and too important to be treated under one head; and as the iniquitous practice not only invades every article of food and drink, but is carried into what we wear, and, still worse, into those drugs to which we too often delusively fly for relief and remedy from the ailments inflicted on our health by adulterated food, we purpose confining our remarks on this shameful system to each article as we come to it in its consecutive order. See BREAD, FLOUR, SUGAR, TEA, &c., and the adulteration of medicines, generalized under the article DRUGS, ADULTERATION OF.

ADVENTITIOUS.—Anything superadded, or acquired contrary to the natural formation. The term is chiefly restricted to the effect produced in one disease—that of croup, where a false or adventitious membrane is formed in the windpipe, which, closing up the natural passage for air to reach the lungs, proves fatal to the patient by suffocation. This membrane is formed in croup by the small vessels of the part exuding a tenacious lymph, which, hardening as it extends along the passage, gradually contracts, and closes at its lower extremity, till it hangs in the windpipe something after the fashion of the finger of a glove, producing death as soon as the closing becomes complete.

It is on account of this adventitious membrane that croup is so rapid in its career; and it is to produce the absorption of this obstruction that the chief efforts of the physician are directed. See CROUP.

ADVICE TO MOTHERS.—The present part of our subject has reference merely to the mother as regards her new-born infant; those portions of the general *subject which appertain to the* mother herself,—rearing by hand, wet-nursing, duty of nurses, cutting of teeth, clothing, food, and management of children,—will be found under PREGNANCY; BRINGING UP BY HAND; NURSING, WET; NURSES; TEETHING; &c.

The duty and responsibility of the mother commence before the birth of her offspring, and respect herself almost as much as her child.

Leaving out of the question for the present the duties appertaining to the parent, we shall proceed at once to show the obligations the mother is under to her infant. One of the first and most important duties the mother owes, not only to her child, but to society, is to have everything in order for the reception and comfort of her baby when born; and as labour may take place at any time after the seventh month, all articles of clothing, and whatever is necessary, or likely to become so, for the dressing and requirement of the child, should be provided and laid in careful and systematic order in readiness, not later than the *end of the seventh month.* So important does the law regard the fact of the mother's neglecting to provide clothes for her baby, that, in a trial for infanticide, such a circumstance would weigh very seriously against the prisoner. In such a case, the law does not look to the kind or the amount of clothing provided; a strip of cotton with a few stitches, though only meant for a bandage, would be regarded as *some* provision for the protection of her child, and the intention of procuring more willingly conceded to her.

The number of articles a mother should provide for her child must, in a great measure, depend upon her means, though there are few wives but who, in their first confinement, are able to obtain all that is strictly necessary for the occasion, especially if they are believers in the efficacy of the modern practice of leaving the poor infant's head without cap or covering. The number or the quality of the clothes is of much less consequence than the *manner in which they are made.*

The following list contains the names and the number of articles absolutely necessary for a new-born infant: as many more may be procured as the taste or circumstances of the mother may dictate.

2 rollers, calico
1 roller, flannel
6 shirts
2 flannel petticoats
2 pilches
4 frocks
18 diapers
4 night-gowns
3 caps.

For patterns, and the mode of making, see BABY LINEN. There is one general rule, however, which should be adverted to in this place; namely, that each garment should be made either with strings or loops, so as to avoid, as far as possible, the objectionable practice of *pinning on an infant's clothing*. Of this we shall have more to say hereafter.

In making her baby's clothes, there are four important points to be considered:—1. To make the dresses to come well up in the neck, so as to keep the neck and chest warm. 2. To avoid any pressure on the shoulder or tightness under the arm, which might prevent a free motion of those members. 3. To make them in such a manner that they can be put on without the necessity of repeatedly *turning the child*. And, 4. To avoid the too common habit of making them too long and too heavy.

Having procured, washed, and ironed her baby's clothes, they should be all carefully placed by themselves in a drawer or box, and kept where, on any emergency, they can be obtained by the nurse; other articles can be added afterwards.

If everything has gone on favourably with the mother, about a fortnight before her expected time the *basket* should be made ready. The proper baby-basket is about two feet square; it should be light, and not too deep, the whole being covered with a lining of loose dimity. The basket should contain one entire set of clothes, half of the diapers, a linen and a flannel roller, two caps, a pincushion, a pot of pomatum and one of lard, a cake of white Windsor soap, a large pomatum pot of plain violet or starch powder, a puff, a soft hair brush, and on the top of all there should be placed three or four pieces of soft old linen, a skein of whitish-brown thread, and a pair of ordinary scissors.

The prejudices the young mother acquires in the nursing of her first baby from the nurse, are liable to adhere to her through life, and may be a source of hurt to others, and an injury to the health of her own children. That the young mother should implicitly believe what her nurse tells her, is not to be wondered at, as such statements come to her with all the potency of tradition, and as the result of incontestable experience. We shall have occasion to refer to some of these vulgar errors and prejudices under the article Nurse, which see. Two instances are sufficient for our purpose now. One of these is the habit some nurses have *of giving the infant, the instant it is taken on her lap, a few teaspoonfuls of warm gin or rum and water, sweetened with sugar;* the other equally objectionable, but more hurtful practice, is that of dosing the undressed infant with *castor oil*. A more glaring mistake, or a grosser outrage on an unoffending stomach than either practice, cannot be conceived: a poor child, who has hardly drawn half an hour's breath, has its tender stomach excessively stimulated by spirits and water, or its bowels racked with a drastic purgative. Yet how many hundreds of infants are made daily to take their first mortal taste from spirits or physic!

The phenomena produced on the infant's body by its first gasp in life, with all that appertains to its existence before and after birth, will be explained under the head of Infant, which see. The first duty the new-born child claims at the hands of the nurse is that of washing.

The principal object of attention in performing this operation from first to last, is to be tender and quick, and only to *turn the child when actually necessary;* it is the length of time taken up in the process, the rough handling, and repeated changes of posture, that renders washing so distasteful to the infant, and calls forth, by shrill cries, that noisy protest to the ceremony: the nurse, in her gossiping task, ignoring the fact that the infant's skin, full of blood and sensation, is the most tender part of its body, and keenly susceptible of her often rough hands and the cold air.

A bath with warm water being placed at her feet, a horse with the clothes required before the fire, and near her reach, and the baby-basket on the opposite side, the nurse, with a sponge and white soap, should commence the business of washing, beginning always with the head, and *absorbing* the moisture from the body by gentle pressure with a soft, porous towel, instead of rubbing the parts dry. Sometimes the body is coated with a white tenacious substance, which can only be removed by warm lard being first rubbed over it, and afterwards washed away.

As soon as the child is dressed, it should be taken to the mother, placed at the breast, *and the first substance allowed to enter its mouth drawn from the mother.* Nature has purposely arranged that the first secretion of milk for every child should be adapted to the wants of the infant; and as the body requires cleansing, and the stomach cannot immediately digest the cheese into which the milk is converted, the first secretion of milk is purposely thin and poor, possessing aperient properties, and almost destitute of those cheesy elements of which, in a few days subsequently, it contains so large an amount. The first flow of milk is of the utmost consequence to the child, and does away with any *pretence* for physic, or the necessity of *feeding*. Where, from ill-health or other causes, the infant cannot be put to the breast immediately, that plan must be adopted which is laid down in Bringing up by Hand, which see.

One of the duties the mother should never neglect to see to, is that no bandage or string confines either the action of the abdomen or chest; for the well-being of the body depends upon the free play of the organs contained in those cavities.

At the same time, the robe and frock should neither be too long nor too heavy, so as to press on the child's feet; and as often as possible the limbs should be rubbed with the hand, and plenty of air admitted to them. The infant cannot too soon be accustomed to *regularity* in the times of feeding and sleeping; a child should not be suckled oftener—as a general rule—than once in every three or four hours, and then rather after rousing from sleep, than just before going to its cradle. The child should be put down awake, and allowed to fall asleep without rocking or singing to. When awake, it should be tossed and moved about as much as possible, or laid on its back on the carpet, and permitted to kick about its legs and work its body as much as it pleases.

The mother should *never take her infant to bed*, or allow it to sleep with her, but so arrange the crib or bassinet, that it may be on a level with her own side of the bed, so as on waking to be able easily to reach, and, when necessary, to suckle her baby, or take it in her arms. But there is nothing a mother should more carefully shun than the extremely hurtful practice *of falling asleep with the child at her breast;* the injury to the child from this habit is nearly as dangerous as it is to the mother.

The cause that renders the infant's body so susceptible of cold or rough contact makes the stomach and bowels equally sensitive to all irritating drugs or hard substances of food; this fact should never be lost sight of in administering physic or aliment to very young children.

On this account, whenever practicable, the *mother* should *take the medicine,* and *allow it to react through the* milk on the child, instead of irritating the digestive organs of the infant by powerful purgatives.

For the same reason, the appearance of the teeth should guide the mother as to the giving of an infant solid food; for till nature supplies the mouth with teeth, any aliment but a strictly liquid one is both hurtful and improper. The first or milk-teeth, as they are called, plainly indicate the nature of the food the mother should give her infant to prepare for its weaning; and not till some of the second set begin to show in the gums, should finely cut animal food be offered to the child. As aliment is the means by which all the organs and members of the infant are developed from their comparatively embryo state, the parent should remember how important it is that the food she supplies her offspring should be of the best possible description — especially as regards her own milk: to keep this pure, and of the most nutritive quality, should be her foremost duty. How she is to effect this will be found under article Milk. And as the health and strength, the physical and intellectual qualities, as well as the moral happiness and longevity of the man or woman, all depend on the care and judgment shown by the mother in carrying her child through the *first two stages of life*, it behoves every parent to know that the best means to effect such great results are by abundance of air, cleanliness, proper exercise, and a sufficiency of good and nutritious food.

ÆGLE MARMELAS.—The Bela; an Indian plant, called the Bengal Quince, belonging to the Natural order *Aurantiaceæ*. Different parts of the tree are used for different purposes; a decoction of the root is, however, the part chiefly employed, being used as a tonic and alterative in chronic affections of the liver and stomach. The bela is a popular remedy in India for palpitations, asthma, indigestion, and dysentery: the unripe fruit, possessing astringent properties, is selected for the latter disorder; the extract, made into pills, as a purgative; and the leaves for affections of the chest.

ÆGOPHONY. — A peculiar sound detected in the lungs by means of the stethoscope, in certain conditions of that organ; so named from two Greek words, signifying the sound of a goat—the peculiar noise made by the passage of the air through the cells producing a noise said to resemble the bleating of a goat. See STETHOSCOPE.

ÆGOPODIUM PODAGRARIA.—Goutwort, or Herb Gerrard; a plant common in ditches, hedges, and the margins of meadows in England and other parts of Europe, and formerly in great repute in cases of gout, sciatica, chronic rheumatism, and painful affections of the joints. So highly was this plant esteemed, when vegetables as drugs were in greater repute, that to carry the plant about the body was considered sufficient, not only to cure the worst case of gout, but to shield the wearer from any danger of being subjected to the disease in future.

ÆGYLOPS.—A disease of the inner corner of the eyelid, somewhat resembling *fistula lachrymalis.*

Ægylops, or goat-eye, derives its name from the supposition that goats are very subject to this complaint. This disease consists of an inflammation and suppuration of the little red gland, *puncta lachrymalia,* observable at the inner corner of each eye, in consequence of which, the tears, unable to enter their duct and descend into the nose, overflow the lid, and, running down the face, irritate and further inflame the parts adjacent to the eye. See Fistula Lachrymalis.

AËRATED BREAD. See Bread.

AERATED WATERS.—All waters contain more or less of air or gas. To this quality they owe their briskness and refreshing qualities. Some natural waters, however, are, to a certain extent, *surcharged* with gases of different characters; these are called medicinal waters, and are to be found in almost every quarter of the globe. For the convenience of fashion, and the benefit of the sick, it has long been the practice to manufacture artificial mineral and aërated waters, or beverages either saturated or charged with gas; of these soda water, lemonade, and ginger beer are the most popular. The mode of preparing each will be described in its proper place, and the medical qualities of each kind under Mineral Waters, Spas, &c.

ÆROPHOBIA.—A dread of wind or air; the name given to the first alarming symptom in *hydrophobia,* that fearful apprehension lest the slightest breath of air should come in contact with any part of the body. See Hydrophobia.

ÆRUGO ÆRIS.—The rust of copper; the pharmaceutical name for the subacetate of copper—verdigris. A preparation occasionally used in medicine as an external application to malignant sores and fungoid growths, either as a plaster or an ointment. See *Verdigris.*

ÆSCULINE.—A new alkaloid substance, the active principle of the common horse-chestnut; said to possess strong febrifuge properties, when given in doses of one or two grains three times a day.

ÆSCULUS HIPPOCASTANUM.—Horse-chestnut. See Æsculine and Chestnut.

ÆTHER. See Ether.

ÆTHIOP'S MINERAL.—The black sulphuret of mercury, popularly known, on account of its colour, as Ethiop's mineral. This medicine, at one time largely used in scrofula and skin diseases, for its sweating or *diaphoretic* properties, is made by burning in a crucible equal parts of mercury and sulphur. Dose, from three to seven grains. See Mercury and Turpeth's Mineral.

ÆTHUSA SINAPIUM.—A poisonous umbelliferous plant, of the hemlock family, commonly known as Fool's Parsley, which see.

AFFECTION.—A term used by physicians to express a condition of the body less severe than a disease, which is generally of an organic character; whereas an affection represents a mere functional disturbance, a disordered state of the stomach, liver, or some other part of the system disarranged, or sympathetically thrown out of order.

AFFINITY.—A term strictly confined to chemistry. A principle by which the relationship or attraction of one substance for another is regulated or determined.

Affinity is the greater attraction one article has for another in preference to a third; thus, if to a solution of carbonate of soda a small quantity of sulphuric acid be added, the soda, having a stronger affinity for sulphuric than for carbonic acid, unites with the former to form sulphate of soda—Glauber salts—which remain in solution, while the carbonic acid is given off in the form of gas.

AFFLATUS.—A word from the Latin, signifying divine inspiration; a term formerly used in medicine to express that condition of the mind in which the individual supposed himself inflated with some divine principle, in virtue of which he was to fulfil some special object beneficial to the spiritual good of man. A species of religious monomania. In a more prosaic interpretation, the vapours.

AFFUSION.—A showering down, a dashing or pouring on of water, or some other fluid, over the whole or a part of the body. A shower bath, or the application of cold water to the body. This form of ablution or bathing is particularly serviceable in certain diseases, especially where the head is affected, but requires to be employed with judgment. See SHOWER BATH.

AFTERBIRTH. — The *placenta*, or cake. That membrane which, in the fœtal life, or the unborn child, is the medium of communication between the parent and the embryo and growing child. See PLACENTA. It derives its name of afterbirth from the fact that in all natural labours it is never expelled till some minutes after the birth of the child, and forms the last operation in the third stage of all labours. Sometimes it is retained in the womb long after the expulsion of the infant, from *atony*, or loss of contractile power in the womb to throw it off; in which case the skin of the abdomen must be taken up in the hand, and, by a rotatory pressure over the organ beneath, induce it to contract and rid itself of the adhering placenta. Occasionally, from causes to be hereafter explained under Labour, the womb is thrown into irregular and spasmodic contractions, by which it is drawn together in one, or even two places, like an hourglass, either shutting up the afterbirth in one or other of the cavities formed, or contracting upon it, holding it as in a vice. See UTERUS, HOURGLASS, CONTRACTION OF. In such cases, the spasmodic contractions have to be overcome, and the afterbirth brought away; for till it be removed, and the womb naturally closed, the patient is in great danger of sudden *hemorrhage*. For mode of operation, and the time necessary to elapse from the birth of the child till the afterbirth should be taken away, see LABOUR, DIFFICULT.

AFTER-PAINS.—These are a repetition of the pains of childbirth, but only much less intense, and to which all women are subject, more or less, for the first week after confinement. In general, however, they seldom extend beyond the fourth day, and only recur now and then, seldom lasting more than a few minutes at a time. A peculiarity attending after-pains is the fact that they increase in severity and duration with the number of children a woman has borne; as if the womb had each time more difficulty in recovering its original size and appearance.

After-pains need cause no alarm, and it is only when excessive that they require any medicinal assistance, as the cause generally brings its own relief.

CAUSE.—Though the womb contracts *immediately on the expulsion* of the afterbirth, it does not recover its natural size for several days—indeed, weeks. In the cavity left, the blood, exuding from the vessels of the womb, collects and coagulates into clots; to expel these through the narrow mouth of the womb causes a certain amount of muscular contraction of the organ, which contraction induces those grinding sensations called after-pains, and according to the size of the clot to be expelled is the severity and duration of the pain, which ceases when the obstruction has passed.

TREATMENT.—When the discharge is considerable, and there are many clots, the pains continue sometimes for hours without any lengthened abatement; in such case, as they produce a good deal of harassment to the patient, the abdomen should be fomented by napkins wrung out of hot water, the application of a bottle of hot water to the bottom of the belly, and the exhibition of twenty or twenty-five drops of laudanum in half a cupful of gruel. Sometimes after-pains are kept up by a costive state of the bowels, not properly relieved before the confinement; in such cases, a dose of castor oil should be given on the second day, or an enema of warm gruel, with an ounce of castor oil, and three drachms of turpentine.

After-pains can always be distinguished from inflammation, and the disease known as *puerperal fever*, or childbed fever, by the pains coming on in fits of longer or shorter duration, with intervals of perfect ease; by the absence of all tenderness of the abdomen when pressed, and by a discharge of coagulated blood.

AGARIC.—Touchwood, or spunk; a whitish, mushroom-like fungus or excrescence, growing on the trunks and great arms of old trees, especially on the larch and oak. There are two varieties, the male and the female;—1st, the white or male agaric, *Boletus laricis*, or agaric of the larch; and 2nd, *Boletus ignarius*, the female, or agaric of the oak.

The agaric is an irregular spongy fungus, extremely light, with a dark brown cuticle, corrugated and rough, though sometimes smooth and porous. After its removal from the tree, the fungus is peeled with a sharp knife, and the soft inner pith, having been cut into slices, is beaten with a wooden mallet on a stone till quite pliable and soft. Both varieties were formerly very largely used in medicine.

The larch, or male agaric, dried and

reduced to powder, was given as a purgative, or, made into an extract, was employed for the same purpose. The oak, or female agaric, however, has always been the most esteemed, and, as an external styptic in all cases of bleeding, was, till within the last fifty years, in general use, not only for punctured and incised wounds, but in cases of amputation, a layer of agaric being laid over the stump to check any secondary bleeding. Though possessing very limited astringent properties, agaric is still occasionally used as a styptic, a piece of the necessary size being placed in the wound, and secured in its place by a proper bandage, till the bleeding ceases. See STYPTICS.

AGARIC OF THE LARCH.

AGARICUS MINERALES.—A very pure carbonate of lime, found native in Germany, and used both internally and externally, in cases of bleeding, as a styptic.

AGE.—The term of human existence; the whole continuance of man's life divided into stages or epochs, each distinctive and peculiar. Human life has been variously divided, according to the theories and opinions of different writers. The most natural and generally adopted division is into the following six epochs:—

1st, Stage of Infancy,—from birth, or end of first dentition, to the 2nd year.

2nd, Stage of Childhood,—from the first to end of second dentition; from 2nd to 7th year.

3rd, Stage of Boyhood and Girlhood,—from the 7th year to the age of puberty; or the age of 13 or 14 in the girl, and from 14 to 16 in the youth.

4th, Stage of Adolescence or Maturity,—from puberty to the full development of the body; or to 20 or 21 in the female, and from 25 to 28 in the male.

5th, Stage of Man and Womanhood,—from maturity in either sex to the first decay; or from 44 and 46 in the female, and 48 or 50 in the male.

6th, Stage of Old Age,—from the period of first decay to the termination of life.

The periods of time between the first four stages are all well marked and clearly defined, but the last two are much more indefinite and uncertain, as some persons will exhibit all the symptoms of age and decrepitude at 55, while others will be hale and robust at 70.

In the first stage, the system consists of a very large proportion of fluid and soft gelatinous parts; during this period, the minute terminal branches of the arteries are extremely active, the whole system undergoing a change from the soft, pulpy state of infancy to the firmer condition of childhood.

The same system of vessels, the arteries,—the masons and carpenters of the human tenement,—is equally active during the next epoch, laying down more osseous matter, to complete the change from the gristle of infancy into the bones of childhood, to give increased fibre to the muscles, and develop the organs of brain, heart, and stomach. The same processes of repair and demolition, of removing the old and laying down new material, so briskly carried on in the first and second stages of life, are continued, though not so rapidly, through the third and fourth epochs, till the frame, having obtained its development, an apparent — but only apparent—pause takes place in the works of the human temple. From the turning point in man's life—from the age of fifty—that slow but unfailing work of demolition continues, till, the frame shrunk and enfeebled, the organs debilitated, and the functions impaired, the machine collapses, and the vital principle becomes extinct. It is in these last two stages that the vices of early life, and those violations of the moral and physical laws too often committed in youth, begin to tell on the system, and with such rapid demonstration, that some men pass at once from maturity into age; and fortunate is it for the man or woman whose temperate youth gives them the hope of a slow and venerable declension. In early life, as we have shown, the fluids are far in excess of the solids; but as time and change advances, this order is reversed: the solids predominate over the fluids; the smooth, ruddy colour of the skin is changed to a dull pallor, showing that the blood has receded from the surface to the centre; hence the greater susceptibility of the aged to cold. The vessels, instead of laying down osseous matter, to *convert gristle* into *bone*, now *absorb the gristle*, and leave a mere *shell of bone*, from which cause the limbs of elderly people are so liable to be fractured. The pulse, that was quick, small, and feeble in infancy; strong, resistant, and full in manhood; becomes slower and smaller as life advances from that period, till it sinks into a shadowy flutter as the last scene of all approaches: and as with the frame, so with the faculties and senses; till, "sans eyes, sans teeth, sans everything," the curtain drops, and life passes into eternity.

The old writers were in the habit of dividing man's age into five epochs of 7 or 9 years, called *climacterics*. 1st, the 7th year; 2nd, the 21st, made up of 3 times 7; 3rd, the 27th, made up of 3 times 9; 4th, the 63rd, made up of 7 times 9; and 5th, the 81st, made up of 9 times 9.

AGGLOMERATE, from the Latin to wind up, or gather into a body. A term used, both in pharmacy and anatomy, to express the blending together of many parts of the same substance or organization. See CONGLOMERATE.

AGNAIL.—An old-fashioned name for a painful inflammation at the root of the nail. See WHITLOW.

AGNES CASTUS.—The Chaste Tree; so called by the ancients, because they believed the leaves of it, given to any one, destroyed all immoderate passion, and insured a life of chastity. An obsolete name for a species of the *Palma Christi* plant, or *Ricinus communis*. See CASTOR OIL.

AGOUTI.—A small ruminating quadruped of the rabbit species, a native of the American continent, but found pretty generally diffused over Asia and the *islands of the* Indian Ocean; and though inferior in delicacy and flavour to the rabbit of northern latitudes, makes an excellent substitute, as an article of food, for that favourite animal. See FOOD.

AGRIMONY.—A plant at one time very extensively used in medicine, either as a drink—being made into a decoction—or the expressed juice of the plant mixed with lard and wax, to form an ointment. It is given internally in cases of obstinate cough, pains at the chest, dropsy, jaundice, gout, and affections of the spleen; and externally as an ointment in long-standing eruptions of the skin, chronic swellings, enlarged joints, &c. There were two kinds of the plant formerly in use—the common and the water agrimony—the virtues of each being nearly similar. A decoction of agrimony is still occasionally used as a cooling drink in fevers and inflammations. The plant belongs to the Natural order *Rosaceæ*.

AGRIOPHAGI.—A race or nation of pepole said by the ancients to have inhabited the eastern coast of Africa, and so named from living exclusively on the flesh of wild beasts. By some authorities these people were said to belong to Nubia, by others to Ethiopia.

AGROM.—This is a disease said to be peculiar to India, and more commonly met with in Bengal. The affection appears to depend upon some disordered state of the digestive and alimentary organs. The most remarkable characteristics of the disease, apart from the febrile state of the system, are a chapped appearance of the tongue; that organ being frequently traced with long or transverse fissures, extending to some depth, while the cuticle of the organ is elevated into rough, dry papillæ where not indented by cracks and fissures: occasionally the upper surface is dotted with white spots. The rest of the mouth, with the lips, participate in the irritation of the tongue, causing much pain and inconvenience. The native remedies are chalybeate waters, and the expressed juice of the mint plant. Mild aperients, with small doses of iron and quinine, by acting on the stomach and bowels, and stimulating the system by the tonic properties of bark and iron, have been found most effectual.

AGUE, INTERMITTENT OR MARSH FEVER.—A disease characterized by paroxysms of fever, with periods of perfect intermission from fever between each, and of which there are three special varieties,—the daily, or *quotidian*, in which the paroxysm of the fever returns every 24 hours; the three-day, or *tertian*, in which the attack recurs at the end of 48 hours, or on the third day; and the fourth-day, or *quartan*, in which there is a clear remission of the fever for 72 hours, or till the fourth day. Besides these three forms of intermittent fever, there are several varieties and complications of each; as the *double*, *triple*, and *duplicated tertian*, and the *double*, *triple*, and *duplicated quartan*. All these latter forms of ague, as well as those which have longer intervals, are generally classed as *erratic*.

Under whatever name the form of ague may be classed, each paroxysm is divided into *three* well-marked fits or stages of disease—the cold, the hot, and the sweating. The time elapsing between the coming on of one paroxysm and the beginning of the next is called the *interval*, and the space between the end of the one and the commencement of the next is known as the *intermission*.

CAUSES.—Ague is frequently the result of exposure to the exhalation arising from marsh lands, stagnant waters, or decayed vegetable matters. Debility, however induced, — though chiefly from watery and poor food, long-endured fatigue, great mental depression,—cold and moisture, however applied, suppression of long-established evacuations, and the repulsion of some eruption from the skin, are among the most frequent remote and exciting causes of this disease, though occasionally it is impossible to trace with certainty any immediate cause.

As an ague or intermittent fever consists of a number of paroxysms, returning at definite or irregular periods — each paroxysm being divided into three well-defined stages or fits, — and as in the *intermission* or space between each paroxysm the patient is perfectly free from all ailment but the debility consequent on the disease, the characters must be given as they appear at each stage of the disease.

SYMPTOMS.—*The cold stage.* — This comes on with a sense of weariness, yawning, stretching, and disinclination to all exertion; the face becomes pale and shrunk, the features appearing pinched and contracted; the legs and arms soon grow cold; a general pallor is observable over the whole body, which seems visibly to diminish and wither; and as the blood recedes from the surface, the sensibility is impaired; the secretions are checked; the bowels confined; the water scanty, pale in colour, and limpid; the breathing is short and oppressed, and the countenance full of anxiety; a heavy, dull pain in the head succeeds; the fingers and toes become blue; and the pulse sinks to a small, quick, and irregular thread, or what feels under the finger like a tremulous line. After these symptoms have set in, or during their progress, a sensation of intense cold comes on in the back, from whence the icy feeling extends over the whole body, when rigors succeed, and a convulsive shivering seizes on the whole frame; the face is deadly pale; the teeth chatter; the voice sinks to a whisper; the very breath feels cold; and the blood seems to the patient as if frozen in his veins. Sometimes the shivering commences with nausea and vomiting. After a longer or shorter duration, varying from forty minutes to two hours, *the hot stage* commences, by the gradual diffusion of warmth, at first spreading over the body in flushes, till it finally settles universally; the skin assumes its proper colour, the breathing becomes free and regular, and the face and surface recover their natural fulness. This condition lasts but a short time; the heat steadily intensifies, till the skin becomes red and apparently inflamed, seeming to swell and grow tense under the progress of the disease. The sense of feeling is extremely acute, the slightest touch causing great pain; while to the bystander contact with the skin imparts a feeling of excessive heat. The pain in the head becomes excessive, and sharp, quick pains dart through the body. The tongue is coated with a white fur; there is an intolerable thirst; the water is hot and high coloured; and the pulse quick, strong, and hard. This state of heat, pain, and distention, with intense pain in the head and a consuming thirst, after a certain time merges into *the sweating stage*, which, as in the others, is at first gradual, and indicated by the breaking out of a gentle perspiration about the face, descending to the neck, chest, and shoulders, and finally, by slow degrees, extending over the entire body; the temperature of the patient falling in an exact ratio with the rise of the perspiration. At the same time, as if the sluices of the body had been unlocked, and all embargo taken off, the secretions are restored, the bowels act, the water is free and copious, throwing down a heavy sediment, the breathing becomes unimpaired and easy, the constriction about the temples and pain in the head pass off, the tongue is clean, or only coated at the base, and the pulse, from the hard, bounding character it formerly possessed, becomes full, round, and soft.

During the progress of these changes, the perspiration has steadily increased, till it becomes a perfect *sweat*—a drench—that more resembles the effect of a bath than an ordinary secretion of nature,—the exuded water flooding the channels and hollows of the skin in a manner to soak the patient and the clothes around him.

OBSERVATIONS.—Of the different kinds or types of ague, experience has shown that the quotidian has the *longest* paroxysm, and the *shortest* cold stage. The tertian has a moderately long paroxysm, and a long cold stage; and the quartan the *shortest* paroxysm, and the *longest* cold stage.

The paroxysm of the quotidian lasts from 12 to 15 hours, the tertian about 10 hours, and the quartan completes its paroxysm in 7 or 8 hours,—though, of course, there are many exceptions to these statements.

The quotidian most frequently occurs in the spring of the year, and is less dangerous at that season than at any other—the attack almost always beginning in the morning. The tertian is also a disease of the spring, and commences about noon. The quartan is particularly a disease of the autumn—the most difficult to cure, and the form most likely to become malignant and dangerous. The time of its attack is most uncertain, and it may come on at any hour.

The agues occurring in spring are often accompanied by inflammatory symptoms, demanding such a modification in the treatment as will provide for such characteristics; while those of the autumn are complicated by symptoms of a putrid or malignant type, and which, like typhus, require a course of tonics and stimulants.

A person who has once had an ague is more liable to a recurrence of the disease than another more exposed to the exciting causes.

Though there is a perfect cessation of the symptoms on the termination of the paroxysm, it does not always follow that the patient is quite well during the intermission.

The paroxysms return with such wonderful regularity, that their advent may generally be timed to a minute.

The agues of warm climates, when dangerous, prove fatal in a much shorter time than those of colder latitudes.

PROGNOSIS.—A *favourable* opinion of the result of the disease may be given when the paroxysms are short in duration, regular in their return, and leave an interval free from fever. An *unfavourable* augury is to be drawn when the paroxysms recur before their usual time, and *do not* leave the patient free when they pass off; when they are unusually long, severe, and induce delirium; when the disease is complicated with enlarged spleen (see AGUE CAKE) or liver, dysentery, or swelling of the tonsils and glands of the throat; and when there is *coma* or lethargic sleep during the paroxysm, with double vision, hiccough, a black tongue, and convulsions.

TREATMENT.—The treatment of ague resolves itself into two branches—that during the paroxysm, and that during the intermission.

In the Paroxysm.—There are two important objects sought by the physician in the treatment of this disease,—1st, to shorten each fit, and reduce the length of the paroxysms; and 2nd, to prevent their return. To effect the first, he endeavours, in the cold stage, to hasten on the hot, and in the hot to induce the sweating; and lastly, as far as possible, to shorten the sweating fit.

Cold Stage.—Where a bath can be obtained, the patient should, on the first approach of the cold stage, take a hot bath, and have the body well rubbed, while in the water, with a flesh-brush. When that cannot be procured, the legs and feet are to be plunged into a pail of hot water, warm woollen stockings put on, the patient placed in a warm bed between blankets, bottles of hot water or heated bricks laid at the feet, thighs, and side of the body; a stomach-tin with hot water applied across the pit of the stomach, and the following draught taken as soon after as possible. Take of—

Camphor water . . .	2 ounces.
Laudanum	60 drops.
Spirits of ether . . .	1 drachm.

Mix. If for a female, reduce the quantity of the laudanum to 40 drops. At the same time, the patient should drink freely of hot spiced gruel; his comfort must be consulted as to the amount of clothes placed on the bed; and as the object is to produce *heat* in the body as soon as possible, blankets and other heavy articles must be laid on the bed in sufficient number to effect that result. Neither spirits nor wine should be given in this stage, as they are apt to increase the severity of the hot stage; and if the ague should be complicated with any affection of the head or stomach, the stimulants might lead to serious consequences. Some medical men prefer commencing the treatment by an emetic of 10 or 15 grains of ipecacuanha, and following it up with the hot bath, bottles of water, and a full dose of laudanum. When the bowels are costive, and the stomach deranged, the emetic is very serviceable, and may be taken in addition to the course recommended; but it must be given the *first thing*, or else omitted.

Hot Stage.—As the body gradually recovers warmth, and that warmth increases to heat, the clothing and artificial means adopted to effect that end must be carefully diminished, first, by the removal of the bottles or bricks from the body and legs; after an interval, those from the feet; then the superabundant bed-clothes; the blanket above the patient is next to be removed, and after a few minutes the one on which he lies is to be withdrawn; and so on with the regular bed-clothes, till, finally, the patient lies simply between two sheets. The importance of proceeding in this methodical manner is well known to those who have had the management of many cases of ague; for such a gradual diminution of the clothing not only affords comfort to the patient, but the sudden removal of all the appliances of heat would be a course highly objectionable.

The two objects sought to be attained in this stage of the paroxysm are to reduce the heat of the body, and expedite the coming on of the sweating fit. To effect the *first intention*, the body should be sponged with cold water to which a little vinegar has been added; or, what is still better, with camphor water, to which sulphuric ether, in the proportion of 2 drachms to a quart of the camphor water, has been mixed. By the use of this evaporating lotion a degree of coolness will be obtained, not to be acquired by mere water or vinegar. The head must be kept cool by cold applications; and when the pain in the head is severe, with indications of congestion, from three to six leeches must be applied to both temples, according to the urgency of the symptoms, or from four to six ounces of blood extracted by cupping. To allay the thirst which forms so distressing a symptom of the hot stage, the *patient should drink* freely and frequently of cooling diluents. For that purpose either of the following drinks may be taken with advantage:—

No. 1. Take of—

Cream of tartar . .	½ an ounce.
Lump sugar . . .	3 ounces.
Half a lemon in slices, and boiling water . .	3 pints,

poured on the other articles, well stirred, and allowed to stand till cold, when the liquor is to be strained, and given as often as necessary, in quantities of a third of a tumblerful at a time.

No. 2. Take of—

Tamarinds	4 ounces.
Water	3 pints.

Boil slowly for a quarter of an hour, strain, and when cold, add powdered nitre, 1 drachm; mix, and give a wine-glassful as often as necessary.

To induce the *second* object, the bringing on of the third stage, the following mixture is to be given, in conjunction with the acidulated drinks. Take of—

Solution of acetate of ammonia	1½ ounces.
Mint water	4 ounces.
Antimonial wine	1 drachm.
Spirits of sweet nitre .	2 drachms.
Syrup of saffron . . .	1 drachm.

Mix. Two tablespoonfuls to be given early in the hot stage, and every half-hour for two or three occasions.

Sweating Stage.—As the aim of the medical man is to endeavour to bring on this condition of the disease as soon as possible, so, when induced, his efforts are bent, without risk, to shorten its duration when once established. As medicine is seldom given in this stage, that result can only be effected by avoiding everything likely to encourage the perspiration, and by close attention to the patient's comfort. All clothes but those strictly necessary are to be removed, both the patient and the room in which he lies kept cool, and the body frequently wiped dry with a soft spongy towel; and when the thirst demands the relief of drink, the best article to be given for the purpose is whey.

If this cannot be obtained from the dairy, sufficient can always be procured by adding a few grains of alum to new milk made slightly warm, and allowing it to stand till the curd has formed and the whey separated. As soon as the fit is over, the body must be thoroughly dried and rubbed with warm towels, clean dry clothes put on, and the exhausted patient allowed to sleep; but if the paroxysm has been severe, and there is much debility, it will be requisite to give him some cordial or stimulant before being left to repose. A tumbler of warm gruel, with sugar, nutmeg, and ginger, and two or three tablespoonfuls of brandy, will generally be found the best preparation for the occasion; though in delicate constitutions a little sherry, in the form of negus or flip, may be substituted with advantage.

Treatment in the Intermission.—As during the three stages of the paroxysm the treatment is little more than palliative, the real art and skill of the physician is confined to that period when the paroxysm is in abeyance, or the *intermission.* Here also the medical man has two objects in view,—1st, to excite a healthy action in the system by judicious medicines, so as to break the morbid chain on which the disease depends; and 2nd, by so fortifying the body as to prevent the recurrence of the paroxysms.

The first measures adopted in the treatment should be directed to the bowels, which, without producing weakness by purgatives, should be well opened by means of aperient medicines, such as are embraced in the following prescriptions:—

1st. Take of—

Powdered rhubarb . .	12 grains.
Powdered jalap . . .	20 grains.
Calomel	9 grains.

Mix intimately, and divide into three powders; one to be given every four hours till they operate.

2nd. Take of—

Compound rhubarb pill .	10 grains.
Compound colocynth pill	6 grains.
Calomel	5 grains.

Mix, and divide into three pills; one to be given every four hours. The bowels having been sufficiently relieved by either of the above aperients, some physicians are content to wait till the near return of the first fit before exhibiting any other remedy, and then, a few minutes prior to the coming on of the cold stage, give an emetic of 10 or 15 grains of ipecacuanha, so timed that the vomiting may take place at the minute the shiverings manifest themselves,—the object being to interrupt the morbid chain of action, and shorten the duration of the whole paroxysm. When the patient is young, and of a full habit of body, the opening of the treatment with an emetic is a practice both sound in theory and confirmed by experience.

Bark, however, or rather its active principle, *quinine*, is the only article in the pharmacopœia that can be regarded as a specific in the cure of ague, and its use must be resorted to in nearly every case where we desire to destroy that diseased concatenation on which all intermittent fevers depend for their vitality. Though quinine should be given at stated intervals during the intermission, it is a short time before the return of the paroxysm when it is most imperatively called for, and requires to be given in increased quantity,— the object in the first instance being to brace and give tone to the system, and in the second, by the strength of the dose before the attack, to arrest the morbid action about to succeed, by the specific influence of the bark on the nervous system. For the first of these intentions, the following mixture is to be employed:—

Bark Mixture.—Take of—

Aromatic confection . .	1 drachm.
Sulphate of quinine . .	12 grains.
Carbonate of ammonia .	1 scruple.
Water	6 ounces.

Mix smoothly in a mortar, and give two tablespoonfuls every four hours during the intermission. While in the intervals between the doses, the strength must be supported by a light but nutritious diet, a sufficient proportion of animal food, with half a glass of port wine—or even more, if the debility require it — several times in the course of the day. And half an hour or forty minutes before the time when the first attack is expected, one of the following powders is to be given; and if the potency of the increased dose of the bark do not break or greatly abridge the length of the first stage, and, as a consequence, each of the others, the paroxysm must be allowed to take its usual course, — the measures we have already recommended under each stage being adopted during the continuance of the attack.

Quinine Powder.—Take of—

Carbonate of soda . .	5 grains.
Ginger powder . . .	2 grains.
Sulphate of quinine . .	10 grains.

Mix: to be given as directed above, either in a little honey, or a small quantity of gruel.

Some medical men prefer commencing the treatment after having duly acted on the bowels by one large dose of quinine, and deferring the exhibition of tonics and stimulants till the succeeding intermission. In such a case, the amount of bark given is sometimes very large, varying from 20 to 30 grains; but as there is considerable risk of affecting the head by large doses, 15 grains of quinine, given with the soda and ginger as above, will generally be found sufficient. Whatever may have been the effect of this one dose on the paroxysm, the aromatic mixture already prescribed, with the wine and diet recommended, is to be employed during the hours of the succeeding intermission; and half an hour before the return of the cold stage, the quinine powder repeated, — the amount of the latter being regulated either to 10 or 15 grains, according to the effect produced on the disease by the first dose.

The rest of the treatment consists of a repetition of the measures already described—namely, the adoption of the means advised under each stage of the paroxysm — the tonic medicine in the intermission; the diet and wine, and the 10 or 15 grain dose of quinine, before the advent of the cold stage. Having broken the force of the paroxysm, rendered the periods of recurrence irregular, and shortened the duration of the fits,—which constitute the first steps in the cure of the fever,—the treatment may be varied by substituting arsenic for the quinine; but as this drug requires to be steadily increased in the dose, and its effect narrowly watched, it *should never be administered by a non-professional person,* and even when under a physician's superintendence stopped directly it produces *nausea or griping.*

The subjoined is the form and quantity in which this article should be prescribed:—

Take of—

Fowler's solution of arsenic	18 drops.
Laudanum	1 drachm.
Mint water	6 ounces.

Mix: two tablespoonfuls to be given every four hours; the quantity of arsenic being increased every second day 6 drops, till the proportion of the Fowler's solution has risen to 60 drops in the above six-ounce mixture.

When it seems necessary to change the form of the medicine, instead of resorting to arsenic, unless under medical supervision, the following forms of tonic will be found infinitely more safe, and frequently more efficacious. Either of the annexed prescriptions may be employed, or each in succession.

No. 1. Take of—

Canella alba, bruised	3 drachms.
Quassia raspings	2 drachms.
Boiling water	8 ounces.

Infuse in a covered vessel for six hours, strain, and add—

Quinine	24 grains,

previously dissolved in a few spoonfuls of water, to which half a drachm of diluted sulphuric acid has been added: mix, and give two tablespoonfuls every four hours.

No. 2. Take of—

Sulphate of quinine	20 grains.
Distilled water	6 ounces.
Diluted sulphuric acid	30 drops.

Mix: two tablespoonfuls to be given every four hours.

No. 3. Take of—

Quassia raspings	2 drachms.
Boiling water	8 ounces.

Infuse for six hours, strain, and mix in a mortar

Quinine	20 grains,

and add—

Compound tincture of bark	2 ounces.
Compound tincture of valerian	1 ounce.

Mix, and give half a wineglassful every four or five hours.

During the whole course of these medicines, particular attention must be paid to the state of the patient's bowels, which, without being relaxed, are to be kept open either by one or two of the aperient pills already prescribed, by half an ounce of *tasteless salts,*—phosphate of soda, — by a few spoonfuls of lenitive electuary, a draught of senna tea in which a little manna has been dissolved, or by a small quantity of Epsom salts.

Quinine in large doses not unfrequently acts on the bowels, producing diarrhœa; a little chalk and aromatic confection will, however, generally arrest this relaxation without having to suspend the use of the quinine.

It must never be forgotten in this disease, that though medicine may correct the disordered action on which the ague depends for its force and danger, the judicious employment of a light, nourishing, and abundant supply of food is as necessary for the restoration to health as medicine is to break the paroxysm, and that the abundance of food must be accompanied with a sufficiency of tonic stimulant, such as port wine or stout; and though spirits are often highly useful, they are *less* efficacious than wine and the strongest *malt* liquor.

PREVENTION.—The best treatment that can be adopted will be unsuccessful in its result, if the patient is allowed to remain exposed to the same influences that originally produced the disease; if, therefore, he cannot be immediately removed from the infected locality, such precautions should be taken as will shield him as far as possible from exposure to them.

Those compelled to reside in marshy and infected localities should, in the first place, pay great attention to the condition of the *bowels*, never allowing them to become relaxed or confined; the body should be protected by good *warm clothing*, the diet should be full and rich, the *meals regular*, and the hours of abstinence in the daytime not to exceed four; while either *wine, stout, or ale*, in sufficient quantity to brace the body, should be taken at least *twice a day*. The individual should *never leave the house, or expose himself to the miasmata* of the marshes, on an *empty stomach;* and such noxious airs are to be avoided particularly at *night* and *morning*. Care must be taken to close all the windows and doors on that side of the house next to the marsh, stagnant water, or whatever may cause the miasm, when the wind blows from that quarter: finally, he should sleep in an *upper* room, and accustom himself to fortify his system by taking a dose of two or three grains of quinine before leaving his home every morning.

When a patient can afford to be removed, nothing will sooner tend to a restoration of health than an absolute and complete change in every respect,—*situation, climate, food, occupation*, and *amusements*. The change of country, however, is of far less consequence than the change of locality—a dry for a moist soil, a high for a low situation, a dry, bracing air for a humid or relaxing one, an animal for a vegetable diet, and an active employment for a sedentary occupation.

There is no infirmity in the list of human diseases that has more deeply engaged the attention of medical men in all times and countries than that of ague, and none in which such a variety of remedies have been tried or so many specifics recommended.

Almost the whole range of the vegetable kingdom has been ransacked for cures, and the barks of most of our native trees have in turn been extolled for their efficacy. These, however, with roots and *bitter herbs*, have in turn fallen into disuse, till the profession anchored its faith on minerals—arsenic from the first taking the lead. It would be too disgusting to enumerate all the remedies which both the physician and the empiric, in the utter despair of finding a specific, have authorized and gravely prescribed in this disease.

Some idea of their nature may be inferred from a remedy still in vogue, and confidently believed in, in many parts of the country: this is nothing less than 10 or 15 grains of the *black spider's cobweb*, given every half-hour a few times before the attack of the first stage. If such an article is to act in any way, it can only be by exciting a revulsion of feeling—the disgust acting as a corrective stimulant to the system. Though the powerful efficacy of Peruvian bark in intermittent fevers has been acknowledged over Europe for the last 200 years, the large quantity necessary for a full dose was a fatal objection to its general use, as few stomachs could bear the amount of powdered bark necessary to effect any beneficial result; hence arsenic and opium, as more manageable, became, under various names and different shapes, the two most trusted remedies. The exertions of the French chemists, about 1820, by extracting the active principle from bark, and giving us in quinine an alkaloid that in *one grain* contained the potency of *an ounce* of Peruvian bark in powder, quite revolutionized the practice of physic, more especially as it affected the treatment of ague, which from that time may be said to have been under the control of the physician.

Bleeding, especially in the cold stage of the disease, was at one time regarded as the most efficacious means devised for the cure of intermittent fever; and Dr. Mackintosh, of Edinburgh, obtained great professional honour for his treatment of ague by bleeding in the cold stage. The theory on which Dr. Mackintosh founded his practice, however sound, obtained few supporters, and practitioners again fell back upon arsenic and opium, which, in different forms, but more particularly under the empirical preparations of ague-drop and black-drop, became the most general remedies, till the concentration of Peruvian bark, in the form of quinine, gave medical men, for the first time, a drug that, if not a specific for ague, approached nearer to that character than any medicine or remedy previously recommended. See PERUVIAN BARK, and QUININE.

AGUE CAKE.—A chronic enlargement of the spleen, or left side of the abdomen, the result of congestion, induced by a long-standing ague, and is more frequently a consequence of Asiatic or tropical intermittent fevers, than those of European or colder climates.

SYMPTOMS.—These are principally an enlargement in the left hypochondriac region, accompanied with a dull, heavy pain—sometimes acute and sudden—causing difficulty of breathing, weariness, and indigestion. The other symptoms are of a constitutional character and a febrile type.

TREATMENT.—When the enlarged spleen remains as a disease after the cure of the fever, it must be treated chiefly by local or topical means. When the pain is severe, preventing lying on the left side, or drawing a full inspiration, the part should be cupped, and six or eight ounces of blood abstracted, or else half a dozen leeches applied over the enlargement, and the bleeding of the bites encouraged by a warm bran poultice. A small quantity of the following ointment is subsequently to be well rubbed into the part night and morning. Take of—

Powdered camphor . .	2 drachms.
Mercurial ointment . .	1 ounce.

Mix. A Plummer's pill is to be taken every other night, and the treatment adopted in ague resumed for some time. In some cases a blister laid over the swelling will be found more efficacious than either the leeches or cupping; the ointment being used as soon as the new cuticle will allow of its employment; the amount of friction being of more consequence than the quantity of ointment used.

AGUE-DROPS.—A medicine sold under the name of "Fowler's solution of arsenic," or tasteless ague-drop. Dose, from four to ten drops, gradually increased. See ARSENIC.

AIR.—That fine, subtle, and elastic fluid which fills all space on the habitable globe, and is known as the atmosphere.

Till a comparatively recent date, air was supposed to be a simple substance or an element, and is still by some erroneously so styled. Atmospheric air, at the ordinary level of the inhabited earth, is everywhere alike, and consists of two gases, *oxygen* and *nitrogen*, or *azote*, with a small amount of carbonic acid, and a little watery vapour. One thousand parts of atmospheric air containing—

Oxygen	197 parts.
Nitrogen	788 „
Aqueous vapour .	14 „
Carbonic acid gas .	1 „ = 1,000.

For all ordinary purposes, it is sufficient to say that 100 parts of atmosphere contain 23 parts of oxygen to 77 parts of nitrogen; 100 cubic inches of air weighing 31 grains.

By the ancients air was regarded as the principle of all life, or, in the phraseology of the Scriptures, the Alpha and Omega of existence. The moment the infant enters the world the chest expands, and the lungs are dilated with air, which becomes henceforth the principle of its life; and the instant the respiratory organs refuse or are prevented from inhaling it, the body dies. The higher we ascend from the ordinary level of the earth, the lighter and the more rarified becomes the air, and the larger the proportion of *hydrogen* gas, which (generated on the earth, and being the lightest and most inflammable of the gases) always ascends to the highest regions, where, occasionally ignited by electricity, it gives rise to those remarkable and beautiful phenomena known as balls of fire, meteors, and the Aurora Borealis. It is to the oxygen contained in the air that the atmosphere owes its vital principle—that gas being the universal supporter of animal life. For its influence on the blood, and its effects on the body, see RESPIRATION, and ANIMAL HEAT.

The amount of air necessary to maintain the body in health depends materially on the occupation of the person, and the state of the constitution: the full grown and robust require more than the infant or the weak. A man needs more air by day than by night, and in health than in sickness; in a high temperature than in a low one; more during exertion than in rest, and after a meal than when fasting. The want of a good supply of pure air is the source of many diseases, and if long submitted to, is certain to be followed by lassitude, languor, and irritability; the nervous system becomes affected, and the intellectual faculties weakened: in such a state, if the cause is not removed, these premonitory symptoms are certain to terminate in fever, or such a condition of body as will sooner or later pass into disease.

Nothing more rapidly or completely vitiates the air than the human body, which, from the lungs, and from seven *million of pores* diffused over the skin, is incessantly pouring out a deadly poison—

carbonic acid—one of the most pernicious and dangerous of all the gases. And as the refuse drainage of the body, and the impure air from the lungs, consist of this agent, the atmosphere in any apartment that has been closed for some time, and in which several persons have been collected, becomes extremely unhealthy and offensive.

It was from this self-generated poison, in a low, confined space, that the Black Hole of Calcutta became in so short a time the tomb of more than a hundred human beings. If, in a state of health, the exhalations from the skin and lungs are, if long submitted to, injurious, in an enfeebled condition they are actually dangerous. In certain diseases and fevers, the amount of noxious gas given off is very great, and for the patient to re-imbibe this, mixed with the atmosphere of the room, is little less than poisonous, counteracting all the skill of the physician or the efforts of nature to arrest or cure the disease. On this account, the sick chamber should always be well ventilated; and when, from the condition of the patient, or the state of the weather, the window and door cannot be occasionally opened, a fire—though in the height of summer—should be lighted in the grate, so as to cause a rapid draught up the chimney, and thus carry off the impure air. See VENTILATION.

Of the ordinary means of purifying the atmosphere of sick rooms, the most important are common and aromatic vinegar, chloride of lime, and chloride of tin; the two first, though not properly disinfectants, are, when poured on a heated shovel, aromatic and agreeable, and afford a refreshing aroma to the nostrils of the invalid. Nitric, muriatic, and sulphuric acid, with salt, are occasionally employed for the purpose of purifying a tainted atmosphere; but as their use is attended with danger, and the two *chlorides* afford all the benefit sought, the mineral acids may be dispensed with. It cannot be too forcibly impressed on the memory of the reader, that an abundant supply of pure air is the first necessary to a sound and healthy body; and that, as in infancy and childhood the consumption of air is larger than in age, during the growing stages of life youth can hardly have too great a supply. On this account, and because the exhalations from the body and lungs of those in age are more poisonous than *from those* in childhood, *infants and very young children should never be allowed, as a practice, to sleep in the same bed with persons of advanced years.* Among the diseases most frequently generated by imbibing impure air loaded with animal exhalation, are dysentery, typhus, scrofula, and tubercular formations of the lungs. See DISINFECTANTS, and ADVICE TO MOTHERS.

AIR, CHANGE OF.—There are many diseases in which change of air, when attainable, is of the utmost importance, not only as affecting the present disease, but as regards the future health of the patient. The diseases that most frequently call for this procedure are early cases of consumption, bronchial affections, ague, scrofula, hooping cough, and some chronic diseases of the liver and digestive organs. The localities most frequently recommended to invalids are Madeira, the south of France, Italy, Malta, and portions of Devonshire. The place most suited for each disease, both abroad and at home, will be found fully detailed under the head of each ailment. See also CLIMATE.

AIR CELLS. — Innumerable small cavities in the substance of the lungs; the expanded termination of the small air vessels; the minute subdivisions of the offshoots of the bronchial tubes. In these cells, the atmospheric air inspired in the process of breathing is freely mixed with the blood, brought to the lungs for the purpose of absorbing the oxygen from the atmosphere, and being converted into arterial blood, as will be explained under RESPIRATION and CIRCULATION OF THE BLOOD, which see.

AIR PASSAGES.—The air passages comprehend the mouth, *larynx*, windpipe, and its divisions into bronchial tubes, and their ramifications and terminations in the air cells, as just explained. See WINDPIPE, and BRONCHIAL TUBES.

AIX-LA-CHAPELLE. — A Prussian city in the province of the Lower Rhine, situated on the Dutch and Belgian frontiers, and regarded as one of the most celebrated watering-places in Germany. From the time of the Romans, Aix-la-Chapelle has been renowned for its medicinal waters.

The city has six hot springs, all strongly impregnated with sulphur, and varying in temperature from 112 to 146 degrees. One of these, remarkable on account of the large amount of sulphur it contains, is called the "sulphur spring," and has a heat of 143 degrees. The characteristics of these waters are that they have a pellucid colour, a sulphureous smell, and a saline, bitterish taste, and consist of—

Sulphuretted hydrogen gas,
Carbonic acid gas,
Carbonate of lime,
Carbonate of magnesia,
Subcarbonate of soda,
Muriate of soda,
Sulphate of soda,
Silica or flint, and water.

These waters are employed both internally and externally; the latter in the form of hot baths, that being the more general form of use.

The diseases in which the waters of Aix-la-Chapelle are considered most efficacious are all kinds of chronic disease or enlargements, cutaneous affections or eruptions of the skin, stiffness of the joints, rheumatisms, scrofulous tumours, indolent ulcers, and paralysis; besides these, however, they are regarded as most efficacious in the debility consequent on salivation, or a long course of mercury. On account of their strong stimulating qualities, these waters are *inadmissible* in all inflammatory diseases.

The baths should be commenced at a low temperature, and the heat gradually increased as proceeded with. The best time for taking the waters, whether as baths or medicine, is between the months of May and June, and again in August and September. See Mineral Waters, Saline Springs, and Spas.

ALAGAO.—A shrub indigenous to the Philippine Islands, which the natives highly esteem as a specific for tumours, ulcers, and any cutaneous affection of the head or abdomen, and which they make into plasters and poultices.

ALAUDA.—The lark. This well-known bird as an article of food is much esteemed for its light, digestible, and nutritious qualities. See Food.

ALBINO.—A Spanish term, signifying the children of negroes who *remain* white, all negroes' children being nearly white when born.

The whiteness of the surface in an albino has a peculiarly pallid appearance —a death-like character, at once remarkable in itself, and disagreeable to contemplate. The hair is white in every part of the body; the iris, or the curtain of the eye, of a pale rose-colour, owing to the absence of the natural colouring matter, or *pigmentum nigrum*. See Eye. On account of this deficiency, the eyes of the albino are extremely sensitive to light, and cannot endure the full glare of day, the vision being always imperfect in the daytime, and vivid at night. The bodies of all albinos are naturally feeble, and their minds proportionally weak. The cause of their peculiar physical character is the absence of all colouring matter from the third or under skin over the whole body. See Skin, and Rete Mucosum. The African albino is said to sleep all day, and prowl by night,—his eyes giving him the properties of the cat.

ALBINISM, from the Spanish word *albino*. A state in which the skin is white, the hair flaxen, and the eyes pink. Both men and the lower animals are subject to this condition of body. Albinism has been found existing in every part of the world, and among people of all colours, though more rare in northern than southern latitudes, or, in other words, in cold than in hot climates; only fourteen authenticated cases having occurred in Europe.

ALBUGO, from the word *albus*, white. A disease of the eye. An albugo is a white opacity of the *cornea*, or horny coat of the eye,—not superficial, but deeply affecting the structure of that membrane. Like *leucoma*, this disease is generally the result of acute ophthalmia. See Cornea, Diseases of.

ALBUMEN.—A clear white animal substance, of a nutritive character, and constituting the material known as the "white of egg." Albumen forms an elementary principle entering largely into the composition of all the animal solids and fluids; abounding in the brain, the serum of the blood, the crystalline and vitreous humours of the eye, the fluid of dropsies, and coagulable lymph. In the white of egg the albumen is liquid and almost pure; it is soluble in cold water, coagulates in hot water, and by heat in any form, by alcohol, and also by acids. Albumen consists of 52 parts of carbon, 26 of oxygen, 15 of nitrogen, and 7 of hydrogen, making 100 parts. Vegetable albumen is found in the green feculæ of plants generally, and in the young shoots of trees, and more or less in all vegetables. Albumen, or the white of eggs, is an antidote for corrosive sublimate, and also useful in cases of poisoning by arsenic. See Antidotes.

ALCHEMY.—The sublimer or more subtle branch of chemistry; from an Arabic word signifying "a melter," because the adepts or early alchemists endeavoured, by the melting of common metals, to transmute them into gold, and obtain the philosopher's stone or the grand elixir of life,—a universal medicine that should convert age into youth, and bestow perpetual health, youth, and beauty. Their third object was the possession of a universal solvent. From the experiments and discoveries of these Egyptian and Arabic visionaries, we owe the rise of the modern science of chemistry.

ALCOHOL.—An Arabic word signifying a pure and refined substance, obtained from something grosser. A fine, impalpable powder of antimony, used by the women of the East to paint the inner margin of their eyelids, so as to impart an appearance of brilliancy to their eyes. See ANTIMONY, and COSMETICS.

ALCOHOL.—Spirits of wine. A pure, colourless spirit, the product of vinous fermentation, and the intoxicating principle of all wines, spirits, and malt liquors, which, from having been originally obtained from wine, is still generally called spirits of wine. Alcohol is an extremely powerful spirit, obtained by distillation from common rectified spirits or whiskey; and, when pure, is light, limpid, and colourless, of a peculiar odour, and a warm, burning taste; is very volatile, boils at 175 degrees, and can only be frozen at an extremely low temperature; burns without smoke, dissolves oils, resins, and several other substances, and unites with water in all proportions, evolving heat by the process. Alcohol consists of carbon, 4; hydrogen, 6; and oxygen, 2 equivalents: if one equivalent or atom of hydrogen and one of oxygen are abstracted from the above proportions, the product, instead of alcohol, will be ether. Spirits of wine, in combination with sulphuric acid, produces sulphuric ether; and either in its purity, or reduced to proof spirit by an equal mixture of water, is the solvent of all the spirits, essences, and tinctures in the Pharmacopœia. Alcohol, mixed with water, and some proportion of essential oil, constitutes the different ardent spirits in general use. The best alcohol, obtained from rectified spirits, retains still some proportion of water: to obtain a perfectly pure spirit, either quicklime or subcarbonate of potass is added to it, which, by absorbing the water, allows the alcohol to be drawn off perfect. One of the best means of testing the absolute purity of the spirit, is to place a little gunpowder in a tea-cup, *cover it* with alcohol, touch the spirit *with a light, and if the powder* explodes when all the spirit has been burnt, the alcohol is perfect; if it does not explode, it contains water, which has damped the powder, and the spirit is therefore impure. From the juice of the sugar cane, fermented and then distilled, rum is procured; from weak wine the French extract brandy; from wheat, rye, and barley, the Dutch obtain Hollands; from malted barley, rye, and potatoes, the gin of this country is produced; while from barley, oats, rye, and potatoes, the whiskeys of Scotland and Ireland are procured: from all of these spirits alcohol is to be obtained by a further process of distillation, though, for many reasons, that from whiskey is preferred.

Spirits of wine varies in strength from 54 degrees to 60 degrees over proof. Alcohol, in its medicinal form, is both a stimulant and a tonic when taken internally; and externally, as a lotion, it is used as a *refrigerant*, for its evaporating properties; and in an embrocation, as a *discutient*, to disperse swellings or tumours.

ALDER.—The bark and leaves of this tree—both the common and black alder—were formerly in much repute, both as an emetic and a purgative,—either made into a decoction with water, or boiled in ale. Its action is, however, very uncertain, and its use has been very properly discontinued.

ALE.—A well-known beverage, and probably one of the oldest fermented liquors in the world; though authors are not agreed as to the exact name to give the barley wine of which the ancient writers make such frequent mention. From the earliest ages of English history, ale and bread were regarded as two of the most necessary articles of existence or daily aliment; this is shown by the fact that the assize of bread and beer always went together. Indeed, so jealous were our Saxon ancestors of the quality of their ale, that every neighbourhood had its officer to inspect the article, and no publican dared to vend his brewing till tasted, approved, and certified by the ale-conner. The re-establishment of some such functionary now would be a great boon to society, as the manner in which this national beverage is adulterated prevents many thousands from partaking of a liquor which, from climate, suitability, and taste, might be every way suited to their state and constitution; for the national beverage of a people is that which the physical condition of the land, the nature of the inhabitants, and experience, have proved to be the best suited to the wants and health of its inhabitants. To the Hollander, living below the level of the sea, surrounded by water and the moisture proceeding from his intersecting canals, the heavy ale of the Englishman would be powerless to keep him in activity and health; he seeks, therefore, in his light and ethereal Scheidam, for that diffusible stimulant, which, while quickening his sluggish system, will brace him to resist the physical evils that surround him. In the same way, every country has a beverage best suited to the state of the climate and the wants of its people; all but in England, where the national liquor, on account of its impurity, is thrown into abeyance.

Ale is an infusion of malt, and only differs from beer and porter in having a smaller quantity of hops. Before the introduction of hops into this country, a bitter principle—added for the purpose of keeping the ale—was obtained from the flowers of the gorse or broom, from wormwood, rue, or any of the indigenous bitter plants. The cultivation of the hop, by yielding a more manageable, grateful, and perfect bitter, at once superseded the coarser articles previously used. Of late years, many varieties or shades of a bitter ale have been made by the addition of an extra amount of hop or bitter principle to the infusion of malt. There were two objects in this manufacture — one to supply the growing market in the East with an article that would stand, without fermentation or injury, the heat of the Indian climate; the other, to afford the invalid a bitter beverage that should answer the purpose of a drink, combined with tonic and stomachic effects. Of the delusion of putting faith in the medicinal benefit to be derived from the drinking of such bitter waters, we shall have to speak under the article Drinks. It will be sufficient here to say, that a purer bitter and a better tonic can always be obtained for dinner or lunch, by mixing a teaspoonful of tincture of hops in a claret glass of water. Medicinally considered, good strong ale, taken in small quantities at the proper time, acts as a tonic stimulant and digestive. As an ordinary drink to quench thirst, ale is the *most objectionable* liquor that can be given; and when taken purposely weak as respects malt, and strong in regard to the bitter, it ceases to be either *a stimulant or a* tonic. There are two diseases where ale, in any of its forms, is most objectionable; those are in gout and gravel, and indeed any affections of the bladder.

ALE-HOOF. — Ground ivy; a well-known wild plant common in the woods and hedges of England, and called ale-hoof from the purpose for which it was formerly used, that of clarifying ale. Medicinally, this plant was at one time held in great estimation, the fresh bruised leaves being considered a sovereign remedy for wounds and contusions, or, made into an ointment, as a cure for ill-conditioned ulcers. A decoction of ground ivy, either alone or in combination with celandine or other plants, is still very largely used by the lower orders as a purifying drink during the spring in cases of scrofula, gravel, and any impurity of the system.

ALE POSSET.—A warm cordial drink, made by boiling a pint of new milk with a slice of toasted bread, and pouring it upon a quart of the best ale, with sugar, nutmeg, and ginger, and mixing thoroughly, either in a large bowl, or by pouring it for a few times from jug to jug.

For an ordinary cold or influenza, half a pint of ale posset, taken at bedtime, after plunging the feet in hot water, will always afford relief, and, in slight cases, often effect a cure.

ALFET.—A cauldron full of boiling water, and anciently used, as an evidence of guilt or innocence, in the water trial by ordeal; the accused plunging his arm up to the elbow, and retaining it in the seething water for a given time. If, by some miracle, the arm was not scalded, the man was declared innocent; when, however, he was injured, it was deemed a conclusive evidence of guilt. The term was afterwards used to express a hot hip-bath.

ALGARET.—A preparation of antimony, formerly in use as an emetic and cathartic, obtained from butter of antimony.

ALGARABA. See Locust.

ALIMENT. — Food, nourishment; whatever in any manner serves to support and nourish the system, or, taken into the stomach, can yield nutriment to the body. Aliments are divided into animal and vegetable; but these again, for perspicuity and practical information, are further subdivided into meat, poultry, game, and fish in the animal, and tubers, *plants*, and fruits in the vegetable. Arranged according to the various principles on which all aliment depends for its nutritive properties, the subject divides itself into nine sections:—

1st. Fibrin: the flesh of all mature or full-grown animals — beef, mutton, venison.

2nd. Gelatine: the flesh of all young, tender, and immature animals — lamb, veal, kid, chicken, fish.

3rd. Oleaginous: fat of all kinds—oil, liquid or concrete; fat of meat, of ducks, geese; olives, cocoa, butter, arnatto, palm oil, &c.

4th. Gluten: farinaceous substances of all kinds—wheat, barley, oats, rice, peas, rye, potatoes, sago, arrowroot, &c.

5th. Albumen: all animal fluids coagulated—the white of eggs, oysters, muscles, calves' and other brains.

6th. Gums: all mucilaginous articles—gum arabic and tragacanth, turnips, carrots, asparagus, cabbage, lettuce, artichokes, and melons.

7th. Sugar: all substances yielding a saccharine juice—sugar, dried fruits, beet, honey, peaches, apricot, &c.

8th. Caseous: the coagulum of milk, every variety of cheese, and all milks denuded of their cream.

9th. Acids: all articles possessing acidity — oranges, strawberries, apples, lemons, pears, &c.

All aliments differ in the degree of their nutritive properties according to the fundamental principles existing in their composition,—the nutritious qualities of several being considerably increased by the condiments either taken with them, or existing naturally in the substances themselves, such as salt, water, and lime.

For the degree in which the several articles are digestible, and capable of being converted into *chyle*, see FOOD.

ALIMENTARY CANAL.—By this name is understood the whole organic system of nutrition, extending from the mouth to the anus. The organs entering into this system are the lips, teeth, and mouth; the *pharynx*, or upper gullet; the *œsophagus*, or gullet; the stomach; the *duodenum*, or first part of the intestines—a kind of rudimentary or second stomach, and about twelve or fourteen inches in length. The duodenum is succeeded by the *jejunum*, and then by the whole mass of small intestines, called the *ileum*, which, united to the spine by the mesentery, turn and twine about themselves in one compact mass. The ileum terminates, by a sudden enlargement of its tube, in the commencement of the large intestines at what is called the *caput cæcum coli*—blind head of the colon, or the blind gut—and forms a sort of elbow or pouch made by the large bowel at this place. The *colon*, called the large intestine, commences at the blind gut, and proceeds up the right side of the abdomen then crosses below the stomach to the left side, proceeds to the bottom of the belly when it makes a sharp turn, and re-ascends for some distance, when it makes a second turn, and once more descends in a straight line in the centre of the body,—this last portion, from the second curve, being called the *rectum*, or straight intestine, whose final termination, surrounded by circular and elevating muscles forms the *anus* or fundament. All the intestines are supplied with valves, which opening *downwards*, readily admit the entrance of the digested food from above but prevent all return upwards. The small intestines lie in the centre, with the colon on each side, and covered in front by a fatty membrane, the *omentum* or caul. From the duodenum to the rectum the bowels are in a state of constant motion, preserving a slow and steady rising and twisting — the action being constantly downwards, which, from its creeping, worm-like character, has been called the *peristaltic* motion. The length of the intestines is always in proportion to the nature of the food on which the animal lives; in carnivorous animals they are extremely short, while in herbivorous quadrupeds, who have to extract their nutriment from grass, they are extremely long. Thus in childhood, where milk forms the staple aliment, they measure ten times the length of the child's body; while in the adult man, they are about six times longer than his person. See BOWELS, INTESTINES, &c.

ALKALI.—A fixed salt. The name given by the Arabian chemists to a salt extracted from the ashes of calcined herbs, and particularly from a plant called by them *kali*, and by us glass-wort, because used in the manufacture of that article. An alkali possesses the following properties:—It has a hot and caustic taste; turns vegetable blues green, and yellows brown; unites with acids, yielding a product differing entirely from either acid or alkali; mixes with oil, forming soap; causes oil to mix with water; and is incombustible. Alkalies are divided into two kinds, the fixed and the volatile. The first embraces potass and soda, to which modern chemists have added lithia. The second has only one, ammonia.

Alkalies were long supposed to be simple substances, but Sir Humphry Davy proved that they had mineral bases, united with oxygen, and succeeded in extracting from them the two metals, *potassium* and *sodium*.

ALKALI, CAUSTIC.—Either of the two fixed alkalies, potass and soda, can be rendered caustic by depriving them of all their neutralizing agents, and leaving nothing but the pure base. This is generally effected by quicklime, which, uniting with the oxygen that supplies the acid, leaves the pure alkali behind, which then becomes a powerful *escharotic*, or burner of the skin, and any animal texture with which it comes in contact. In this state, when made solid, the caustic alkali is used to destroy the cuticle and adjacent fatty tissue, for the purpose of forming an issue. See POTASSA FUSA, ISSUE, &c.

Caustic alkalies are sometimes inadvertently taken, or purposely given as a poison, when they act as violent corrosive irritants, inflaming the coats of the stomach, and causing extreme suffering. The best ANTIDOTE is vinegar, which, if drunk in quantity, will neutralize the alkali, and convert it into a harmless acetate. The next remedy in efficacy is lemon juice, or indeed any vegetable acid. If these cannot be procured, the person should drink olive oil and honey to shield the coats of the stomach, and a few minutes after, a pint of warm water, with a teaspoonful of salt dissolved; and if vomiting does not immediately take place, the throat should be tickled with a feather to provoke the stomach to throw up its contents. See POISONS.

ALKALOID.—A vegetable salt; a preparation containing the concentrated essence and active principle of any article.

The great advantage of an alkaloid is, that it enables the physician to prescribe with greater certainty, and in infinitely smaller doses; thus, instead of giving a tablespoonful of Peruvian bark, a much more certain effect can now be obtained from two grains of quinine. Quinine, morphia, and strychnia are alkaloids.

ALKANET.—An herb called Spanish Bugloss; a plant common in Kent and Cornwall, and at one time much used in cases of obstructed bile, diseases of the kidneys, and ague, but now entirely set aside. Alkanet is still used *in pharmacy, on account of the beautiful rich red colour* obtained from the root and stems, and is employed to colour ointments and tinctures.

ALKERINES.—A medicinal confection and cordial, made of the kermes berry, pippin cider, rose water, sugar, ambergris, musk, cinnamon, aloes-wood, and leaf gold.

ALKOOL.—A preparation of antimony, used by Eastern ladies as a cosmetic to darken the eyelashes and eyelids. See ALCOHOL.

ALL-HEAL.—A well-known English plant, the Hercules Wound-wort, growing in moist and waste places, on the banks of rivers, and other shady situations.

The plant has long hairy leaves, and small red flowers, gathered in clusters round the stalk. It was once very greatly esteemed as an external application to all kinds of wounds; while a decoction of the plant was taken in all obstructions, especially in those of the liver and kidneys, gout, cramp, and convulsions. As an application to bleeding wounds and foul ulcers, the bruised leaves, simply applied and bound to the part, are still frequently employed by the country people, and certainly with considerable success.

ALLIUM.—The botanical name of the onion tribe, embracing all varieties of that plant, with the leek and garlic. See GARLIC, LEEK, and ONION.

ALLOPATHY.—That system of medicine which aims at the bringing of the body to a state incompatible with the continuance of, or subjection to disease. Of late years, however, the word has received a sort of party signification, quite at variance with its derivation, and is now used to express that system of medicine that treats diseases by the means of *drugs in large doses*, and is contradistinguished from the new system of medicine called *Homœopathy*, which affects to treat diseases by *infinitesimal doses* of medicines, and those prepared in a peculiar manner. Allopathy is, in fact, regarded as the converse of Homœopathy, which see.

ALLOY.—The mixing of a baser with a nobler metal in any proportion. The current coin of the realm is an example of an alloy where silver is mixed with copper, and gold with silver and copper, to render the coinage more durable. In a general sense, the combination of all the metals, except mercury, in any proportion or number, is an alloy. When mercury is employed, the product is called an *Amalgam*, which see.

ALLSPICE.—The Pimento plant and

fruit, sometimes called Jamaica Pepper; a small shrub or tree, a native of the West Indies, whose berries, ground into powder, form the pepper so universally used as a condiment in cookery. Medicinally, the allspice is a warm aromatic and grateful substance, used as a carminative and stimulant. From the pepper possessing the flavour of nutmeg, mace, and cloves, it has obtained the name of allspice.

ALLUVIAL SOIL is land added to any spot by the wash and force of water. The natural alluvial is that fine, attriturated *débris* slowly washed from the upper to the lower surface by the constant action of rain and floods, making a slow and imperceptible increase on the surface of the plains. Upon the banks and country adjacent to great rivers, the alluvial deposit is, from inundations, much greater than in localities removed from the effects of such causes. Alluvial soil is generally the lightest and richest of all kinds of lands, and in which vegetation is most prolific.

ALMOND.—A fruit contained in a porous shell, enclosed in a tough skin. The almond tree originally came from Syria, but is now cultivated in the south of Italy and Spain, and along the Barbary coast.

The peculiarity of the almond tree is, that it shows its blossoms before its leaves. There are two kinds of almonds in the market, and both used in medicine—the bitter and the sweet. The BITTER ALMONDS are chiefly employed for their flavour, an essential oil of a beautiful aromatic perfume being extracted from them; but from its extremely poisonous properties it must be used with great care. Both the perfume and the poison depend on the prussic acid the fruit possesses. Oil of bitter almonds has, of late years, been frequently used for the purpose of suicide, and, from the suddenness of its action, most frequently with fatal results. The best antidote for this poison is an instant emetic of 20 grains of sulphate of zinc in warm water, or 12 grains of sulphate of copper, also dissolved in warm water. Directly the stomach has been emptied, a few cups of strong coffee are to be swallowed, in which both brandy and ammonia are combined; a shower bath of cold water over the head and chest, and 2 drachms of turpentine, in coffee, are to be given every three hours; and when electricity can be had, a few shocks are to be passed through the spine and chest. See PRUSSIC ACID.

SWEET ALMONDS are chiefly used for the purpose of making emulsions for coughs and colds, being, after blanching, beaten up with gum and sugar, and triturated in a mortar with water, till the whole is taken up and smoothly blended; the liquid is then to be strained, when it is called almond emulsion, or milk of almonds, and may be either taken alone, in any quantity, or used as a vehicle for syrup of tolu, paregoric, and spirits of nitre, as a cough mixture. The only preparation into which sweet almonds enter in the Pharmacopœia, is the confection, —*confectio amygdalæ,*—which is a paste of blanched almonds, sugar, and gum, any quantity of which can be rubbed down with warm water, to form the milk or emulsion described above.

Almonds, though not very digestible, are extremely nutritious and wholesome. They yield by expression, and by the addition of boiling water, a large proportion of oil, which is considered the purest of all the vegetable oils.

ALMONDS OF THE EARS.—A popular name for the tonsils, when from any cause they become enlarged, causing an external swelling and difficulty of swallowing. The tonsils are two small glands, situated at the back of the mouth, and from their shape and position called the almonds of the ears.

Children are much subject to this affection, which, however, is easily cured by rubbing the part below the ear with a little camphorated oil, and keeping the throat protected from the cold by a piece of flannel. See TONSILS.

ALOES.—A gum resin, the product of a genus of succulent plants, belonging to the Natural order *Asphodeleæ.* The species yielding the medicinal gum is the *Aloe perfoliata,* and is a native of the south of Africa, and the East and West Indies.

The drug is obtained by making incisions in the leaves of the plant, and allowing the juice to exude, and fall on palm leaves, spread below to receive it, where it remains till sufficiently dried by the sun to be packed up for exportation. Besides the aloes, the leaves yield a beautiful violet dye, which possesses the singular property of requiring no mordant to fix the colour. The aloe was greatly venerated by the Egyptians, and used by them in most of their religious ceremonies. It is still highly prized by the Mahommedans, who regard it with the same reverence the Christian pilgrims did the palm; every true believer, on his return from Mecca, plucking a leaf from the plant, and hanging it over his door as a trophy of his pilgrimage, on reaching his home.

There are three varieties of aloes used in medicine, called the Cape, Barbadoes, and Socotrine. The first, brought from the south of Africa, is the worst, and, on account of the griping it produces, seldom used. The Barbadoes, or West Indian, is a very superior, close-textured, and certain drug; but in consequence of its being used for cattle, and called horse aloes, it has fallen into disuse. The Socotrine, so called from the island of Socotra, in the Persian Gulf, where the plant is cultivated, is regarded as the best.

Aloes is one of the most valuable purgatives we possess, and a drug of great importance from the number of effects that may be obtained from it. It has a strong, bitter, but aromatic taste, and is a warm, stimulating purgative, acting *almost exclusively* on the large intestines, particularly on the *rectum.*

As a purgative, the dose is from 5 to 12 grains. Aloes possesses the singular property of being as efficacious in a small as in a large dose, when given as a purgative. From its action on the lower bowel, there are certain complaints in which aloes is inadmissible; among these are inflammation of the bowels; piles, whether blind or bleeding; affections of the bladder; and in every stage of pregnancy.

As a tonic and stomachic, either alone or in combination, in doses of 1 grain, it is an excellent remedy, and may be given every four or six hours (see Dinner Pills, and Hiera Picra); and as an *emmenagogue*, or medicine to act directly on the womb, in decoction, infusion, or tincture, is one of the most reliable medicines we possess. For this purpose, the dose of the powder is from 5 to 15 grains.

Aloes enters into the composition of nearly all the pills in the Pharmacopœia, besides contributing to several tinctures. The most important of the pills are, the compound aloetic, compound colocynth, assafœtida, rhubarb, aloes and myrrh, or *pil rufi*, and Anderson's pills.

ALOPECIA.—A disease of the scalp, inducing baldness, and called the fox evil, or the scurf; a disease in which the hair falls off from the head by the roots. See Hair, Diseases of.

ALPHUS. — A cutaneous disease; a species of leprosy, in which the skin is rough, and covered with irregular white spots. See Leprosy.

ALTERATIVES.—*A class of medicines* that, without producing any visible operation, effect a corrective and beneficial action on the system. Medicines which gradually produce a change in the condition of the body from disease to health.

Alteratives may be either internal or external. External alteratives are medicinal baths, whether hot, cold, or vapour. Most of the mineral and vegetable purgatives are made alteratives by the dose in which they are given. A Plummer's pill, taken every night, with half a pint of the decoction of sarsaparilla, taken in two doses, in the course of the following day, and continued for some time, will be found a very efficient alterative course in any case where there has been disease or severe affection of the liver. Or one of the following powders, taken every morning, and a cupful of the annexed decoction twice a day, will act as a most beneficial alterative in cases of jaundice, lumbago, or any affection of the kidneys. Take of—

Grey powder	15 grains.
Rhubarb powder and Colombo powder, of each .	6 grains.
Ginger powder	4 grains.

Mix, and divide into six powders.

Take of—

Dandelion root, cut small	3 ounces.
Woody nightshade, bruised	½ ounce.
Cascarilla bark	2 drachms.

Boil slowly in three pints of water down to two; strain, and use when cold.

ALTHÆA.—The botanical name for the Marsh Mallow, which see.

ALUM, sometimes called Argil.—This well-known drug and invaluable assistant in the arts, is a compound earthy salt, consisting of alumina, potassa, and sulphuric acid, and chemically known as a sulphate of alum and potass. Alum is found in many parts of the world, both native or pure, as an efflorescence on the ground, or in mines, in combination with earth or clay, from which it has to be separated by fire and water.

Alum seems to have been unknown to the ancients. The first regular alum works of which we have any account were established at Roccha, in Syria, by the Arabians, some time in the Middle Ages. From a corruption of this name, the term of *roch* or *roach* alum, in all probability, was given to this salt. At the beginning of the 15th century, alum was found in great abundance, and remarkable purity, in different parts of Italy, especially near Rome, which made the Italian peninsula the chief centre of all the alum trade of Europe. The most celebrated locality for this earth is a mine at Tolfa, in Naples, where the rock is almost pure, and of such extraordinary hardness, that it has to be blasted with gunpowder, and is then broken up into masses with strong picks. In the 16th century, Sir Thomas Chaloner discovered, for the first time in England, alum on his estate in Yorkshire, and of a quality equal to any obtained from Italy. Of later years, alum has been found in Lancashire, Northumberland, and Lanarkshire.

The alum obtained in this country is found either in combination with a kind of earthy clay, from which it is obtained by washing the earth with water, filtering the liquor, and then boiling it till ready to pour off and crystallize; or it is found in combination with a slaty stone, from which it is procured by building a long platform of fagots; upon this basis, the workmen erect a pyramid of *alum-slate*, as it is called, fifty feet long and forty feet high. The fagots are then ignited, and as the flame ascends through the slaty mass, the pieces crumble, and the alum is easily separated afterwards. The ashes are then flung into tanks of water, and stirred till all the salt is dissolved, and the impurities have fallen to the bottom. The liquor is then drawn off, and boiled in leaden cauldrons, till most of the water is driven off in the form of steam; the boiling liquor is next emptied into casks, and left till it crystallizes into one compact mass, when the hoops are knocked off, and the alum broken up, exposed to the air to dry, and finally repacked in casks for exportation. In its natural state, alum is opaque, and of a yellowish, or greyish white colour; but when purified for use, is transparent like glass, and in large, oblong crystals.

PROPERTIES.—Alum is a powerful astringent, and when applied to the tissues of the body by its action on the blood-vessels, renders the parts pale, at the same time thickening their coats.

USES.—It is used both internally and externally as an astringent in bleedings, fluxes, and diarrhœa; and as a gargle, with sage tea, or infusion of rose leaves, in cases of relaxed or inflamed sore throat. Some practitioners use it with good effect as a *prophylactic*, or preventive in *colica pictorum*, or painter's colic. The only preparation of this article kept in the shops is the *alumen ustum*, or burnt alum; an escharotic employed to destroy fungus growths, warts, or as a stimulant to ill-conditioned ulcers. The dose of powdered *alum in cases of hæmorrhage* is from 5 to 15 grains, repeated every hour or two till the bleeding abates. When frequently taken, however, it is apt to produce pain and nausea; in such cases, and when it is necessary to continue the alum, a quarter of a grain of opium, or 5 grains of aromatic powder, mixed, for two or three times, with the alum, will correct those symptoms. Alum is sometimes employed to make whey, when a drink of that nature is required. This is effected by stirring a few grains of alum into some scalding milk, straining the whole through muslin, and setting the whey aside to become cold.

A few grains of alum, beaten up with the white of a few eggs, makes a coagulum, which, if spread between a piece of muslin, and applied to a black eye soon after the injury, will often produce immediate absorption, and prevent discolouration. See GARGLE, BLACK EYE.

The dyer uses alum, not only to cleanse the texture he is about to dye, but as a mordant, to fix the colour on the material, so as to prevent its being washed out. The tanner employs it to give firmness to his limp skins; the paper maker to give a white surface to his sheets; while to the engraver, letter-press printer, and calico printer, alum is equally necessary. It is used to give firmness, gloss, and colour to candles. It separates the butter from the cream, purifies water through which it is filtered, has the property of resisting fire, when paper or cloth is soaked in it, and is also largely used as a means of adulterating bread, by making inferior flour look like superior, and is employed in numerous other ways. See BREAD.

ALUM EARTH.—A heavy mineral, of a blackish-brown colour, of a dull lustre, and soft consistence. Shale-alum-slate, occurs *amorphous*—shapeless, or in concentric balls.

ALUMINA.—The metallic oxide, or mineral base of alum, in combination with oxygen.

ALVEOLI.—The name given by anatomists to the cells, sockets, or cavities in both jaws, for the reception of the teeth.

The *alveolar processes* are thin, shell-like elevations that surround the teeth on their quitting their sockets, and assist the gums in keeping the teeth firm. It is a piece of one of these alveolar processes that so frequently comes away with the tooth when extracted, and gives rise to the erroneous supposition that the dentist has fractured the jaw. See TOOTH-DRAWING.

ALVINE CONCRETIONS.—Any concretions formed in the alimentary canal, and expelled either from the bowels or stomach, no matter what may be their size, are included under this heading. Alvine concretions are either formed in the liver, gall-bladder, stomach, or intestines, though those from the gall-bladder or its duct are by far the most frequently met with. In general, these concretions are little larger than peas, though sometimes they are met with as big as an orange. See Gall-Stones, Biliary Secretions, Calculi.

ALVUS.—The bowels. A Latin word, only used by physicians, as applied to the intestines or alimentary canal.

AMADOU.—A substance obtained from agaric, the *Boletus igniarius*, and used as a touchwood, for obtaining a light, as from tinder, by a match, when a spark has been struck on the amadou. See Agaric.

AMALGAM.—A compound of mercury or quicksilver with any other metal. Any alloy of metals, no matter the number or the quantity of each, so long as mercury forms an essential constituent. The only amalgam used medicinally is that employed to generate electricity, and is composed of tin, zinc, and mercury.

AMARANTH, or Flower Gentle.—A genus of plants of which there are many species; the tricoloured, however, is the most esteemed, on account of its leaves presenting the greatest variety of colours. The amaranth was regarded as everlasting, because its leaves endured for a length of time without any sensible decay. The ancients esteemed this plant as a type of immortality. Medicinally, the amaranth was formerly in great repute as a remedy for all discharges of blood, or immoderate fluxes, and was supposed to be a specific for all strong passions.

AMARYLLIS.—The daffodil. A genus of liliaceous plants. See Lily.

AMATIVENESS.—A term used in phrenological science to indicate an organ situated at the back of the head, or occiput, and supposed to represent amatory passion, or sexual love, and stands first in the Alphabet of Phrenology, which see.

AMATORII MUSCULI.—A name formerly in use among anatomists, for two muscles of the eye, whose action was to give that downward, outward, and oblique motion to the eye, said to be only practised in perfection by females, when they ogle; now called the *trochleares*, or sympathetic muscle.

AMAUROSIS.—A *dimness or loss of* sight, without any external alteration in the eye. The word is derived from a Greek word, signifying to obscure. By the term amaurosis is understood all affections of the nerves of vision, which produce either complete or partial loss of sight, whether proceeding from a primary or secondary cause, or from functional or organic disease. Amaurosis is regarded by some writers as the result of paralysis of the optic nerve; by others, as a morbid state of the retina and optic nerve, from whatever cause produced. See Blindness; Eye, Diseases of.

AMBE, or AMBI.—A surgical apparatus. Literally, a ridge, or the edge of a hill. An instrument anciently in use for reducing dislocations of the shoulder.

AMBER.—A hard, semi-pellucid, yellowish substance, supposed to be a fossil, tasteless, and devoid of all smell, unless heated or powdered, when it emits a pleasant perfume. It is generally found in alluvial soils, or on the sea beach, but is procured in greatest abundance on the shores of the Baltic. The amber is never used in medicine, but an oil, obtained from it by distillation, the *oleum succini*, is largely employed, either alone or in combination, as a stimulating embrocation, especially in rheumatism, hooping cough, &c. See Embrocation.

Amber, though sometimes found in soft, gummy-looking masses, is occasionally obtained hard and brittle, when it receives a beautiful polish, and admits of being carved. When much rubbed it becomes strongly electrical, attracting small substances with great facility. This property was known to the ancients, who gave it the name of *elektron*, from which we derive our modern word electricity.

AMBERGRIS.—A perfume. Ambergris is a solid, opaque, ash coloured, inflammable material; richly variegated, like marble; extremely light, but of a rough, unequal surface, which, when heated, gives off an agreeable odour. Ambergris is a diseased formation, found in the intestines of the spermaceti whale, and procured from the waters of the Southern Ocean, in those localities frequented by that marine animal, where it is found floating on the surface. It is soluble in spirits of wine, to which it imparts its perfume, when it is called Essence of Ambergris.

AMBIDEXTER, or two-handed. A term applied to a person who can use his left hand with the same facility as his right. This power of using both hands with the same ease is of great advantage to a surgeon, as it enables him to bleed, draw teeth, and perform several operations with greater convenience than the practitioner who has only educated one hand.

Though most frequently a natural gift, it is in the power of any one to teach his left hand to rival his right, or *vice versa*, in cases where the person is left-handed.

AMBULANCE. — A moveable field-hospital. A covered carriage, mounted on springs, and fitted up with every medical and surgical requisite for the wounded in battle. The ambulance has its staff of surgeons and orderlies, and by keeping well up with its regiment when in action, is enabled to afford that aid to the wounded which they could not procure for hours but for the assistance such vehicles can give, both in the amputating of limbs, and dressing of wounds, and then removing the sufferers to the rear, or permanent hospitals.

AMENORRHŒA.—One of the six forms of disease affecting the uterus, and connected with that natural secretion on which the integrity of the organ and the health of the female depends. Amenorrhœa is that condition of the periodical discharge when it is entirely suspended; but as these diseases will be more easily understood, and better treated, if embraced under one head, the reader is referred to the article MENSTRUATION, which see.

AMIDINE.—A thin, horny substance, obtained from starch, which, being soluble in water, is sometimes used to stiffen surgical cloths or rollers.

AMMONIA.—The only volatile alkali, and commonly called Hartshorn.

Ammonia is obtained naturally from all putrescent animal substances, and artificially from most animal matters, except fat, by distillation in iron cylinders.

Hartshorn, or ammonia, in its pure state, exists in the form of gas, and is generally procured by mixing quicklime with powdered sal ammoniac, and distilling the mixture; the ammonia, in the shape of a gas, passing off, and being first led through mercury, is either collected in jars, or admitted into water, which, according to the amount of gas absorbed, becomes either the liquid known as spirits of hartshorn, or that powerful and dangerous article, caustic ammonia, or the strongest liquor of ammonia. Ammonia possesses all the properties, chemically and medicinally, of an alkali, and others special *to itself, and is composed* of 3 atoms of hydrogen and 1 atom of azote, or nitrogen.

As a medicine, ammonia acts as an absorbent or antacid, diaphoretic, stimulant and antispasmodic, and there are few diseases in which it is not, in some form or another, employed with advantage: few drugs possess a more general or beneficial action.

DOSE.—

"Spirits of hartshorn," *liquor volatile cornu cervi*. This preparation is too powerful for internal use generally, and is used to apply to the nostrils in cases of fainting, and to mix with sweet or camphorated oil, to rub sore throats.

"Caustic ammonia," *liquor ammonia fortissima*. The preparation has been already described. It is so extremely powerful, that it can only be used with the greatest caution; a few drops put on a sponge, and kept in a stoppered bottle, being employed as an application to the nostrils in cases of violent hysteria, or suspended animation; or in cases of necessity, where there is no time to wait for the rising of a blister, a few drops rubbed on the skin raises a bladder instantly.

"Carbonate of ammonia" (Baker's), or volatile salts, *ammoniæ carbonas*. This is by far the most common and most useful preparation of hartshorn, and is prepared by mixing sal ammoniac and chalk, and then distilling the mixture from a retort; the carbonate of ammonia, or stone hartshorn, as it is sometimes called, forming round the neck of the apparatus.

Volatile salts is one of the best diffusible stimulants we possess, and is given in the form of a mixture in cases of suspended animation, fainting, hysteria, paralysis, affections of the stomach, and many others. Dose, from 5 to 8 grains.

"Liquor of carbonate of ammonia," *liquor subcarbonatis ammoniæ*. This preparation of liquid hartshorn is merely a certain quantity of volatile salt dissolved in water, the dose being from 30 to 60 drops in a little water.

"Spirits of mindererus," *liquor ammoniæ acetatis*. This highly useful diaphoretic mixture is made by adding vinegar to powdered volatile salts, till the effervescence ceases, and the alkali is neutralized. In all cases of fever, or whenever an action by perspiration is desired, from 1 to 4 drachms of this preparation may be taken with advantage, and if conjoined, as in the following manner, a fever mixture of singular efficacy is obtained. Take of—

The liquor of the acetate of ammonia	1½ ounces.
Antimonial wine . . .	3 drachms.
Syrup of saffron . . .	2 drachms.
Camphor water . . .	3½ ounces.
Spirits of nitre . . .	3 drachms.

Mix: take two tablespoonfuls every two hours.

"Spirits of sal volatile," *tinctura ammonia composita*. This popular and useful preparation is prepared by mixing alcohol, in which some essential oils have been dissolved, with liquor of ammonia, and then distilling the whole. As a stimulant and antispasmodic, the dose of sal volatile in water is from 10 to 30 drops, according to circumstances.

The latter dose, in half a tumbler of water, repeated, if necessary, in half an hour, has a singular effect on an intoxicated person, by restoring him to the full possession of his senses in a very short time. See DRUNKENNESS.

The "nitrate," "nitro-sulphate," "tartrate," "phosphate," and a few other salts of ammonia, are sometimes employed as diaphoretics and diuretics, but their use is by no means large, being chiefly employed as manures. There are several tinctures in the pharmacopœia to which ammonia is added—as those of iron, valerian, opium, guaiacum, &c.—the properties and doses of which will be given under each in its proper order.

AMMONIACUM.—A gum resin, and very valuable drug, obtained by exudation from the shrub *Dorema ammoniacum*, a native of Africa and the East Indies, and is procured in small opaque drops or tears, of a yellowish or brown colour, and a faint aromatic smell, insoluble in spirits of wine, and water, though by long trituration it becomes suspended in the latter, and forms a very excellent medicine, called, from its white colour, the milk or *lac ammoniacum*.

Ammoniacum acts medicinally as an expectorant, stimulant, and antispasmodic; though, when taken in large doses, it operates directly on the bladder or the bowels.

The only preparations into which it enters are the compound squill pill, the ammoniacum and mercury plaster, and the mixture or milk of ammoniacum, referred to above.

In all cases of cough, cold, and oppression of the chest, this drug becomes one of the most *important expectorants* we possess, especially where there is much thick, tenacious phlegm. The milk of ammoniacum is made by rubbing down 2 drachms of the gum in a mortar, with 8 ounces of cold water, adding the water drop by drop, till a smooth, cream-like fluid is obtained, when the water may be added in larger quantities, till the whole is incorporated. To make this preparation properly, a quarter of an hour's constant rubbing is requisite, and that, too, before the bulk of the water is added. To insure the more complete suspension of the ammoniacum, and also to save time in the operation, a few grains of potass or carbonate of ammonia should be used with the gum. The dose of the simple milk of ammoniacum is from a dessert to a tablespoonful, repeated every four hours. The following combination will be found invaluable in all cases of hard, dry, and obstinate cough:—

Cough Mixture.—Take of—

Milk of ammoniacum .	4 ounces.
Syrup of squills and syrup of tolu, of each .	6 drachms.
Laudanum.	1 drachm.
Spirits of nitre, and antimonial wine, of each	3 drachms.

Mix. A tablespoonful of this cough mixture may be taken every two hours for an adult, and given to children in doses of *from half a teaspoonful to a full dessertspoonful*, according to the age. The plaster is used to dissipate chronic swellings, the stimulating properties of the gum being thought to cause the absorption of the mercury; the benefit, however, of this preparation is very questionable. The pills form a good expectorant in cases of asthma and ordinary colds, and may be taken in doses of one every six hours. See SQUILL.

AMMONIAC, SAL, or MURIATE OF AMMONIA. See SAL AMMONIAC.

AMMONIUM. — As Sir Humphry Davy succeeded in discovering the metallic base of the two fixed alkalies, it has been supposed that a similar result might be procured from ammonia; as yet, however, the fact has not been satisfactorily proved.

AMNIUM.—The internal membrane that surrounds the child in the womb; a thin, transparent texture, like a bladder, in which the fœtus floats in a fluid called the *liquor amni*, which, at the time of childbirth, is discharged, and called the *breaking of the water*. See MEMBRANES, LABOUR, PREGNANCY.

AMOMUM.—The botanical name of a genus of aromatic plants, of which cardamom, ginger, and turmeric are the principal.

AMORPHOUS.—A Greek word, signifying without shape or form. The term is now generally applied to chemical compounds in which no special figure is preserved: thus, a cheaper preparation of quinine is called amorphous quinine, because it is devoid of those beautiful pointed crystals so distinctive of the sulphate. Any inorganic substance in its natural condition is called amorphous.

AMPHORIC RESONANCE.—A term used in auscultation, or the science of detecting disease by the ear, by means of the stethoscope. The word is derived from the Latin *amphora*, a tall, narrow vessel or jar, and amphoric resonance is said to resemble the sound of blowing into an amphora or a bottle. See STETHOSCOPE.

AMPUTATION. — By this word is understood the operation of removing, by cutting off, any limb, member, or part of the body, though latterly the term *excision* has been employed for many of those operations formerly embraced under amputation, and this word used only for the removal of limbs and members. As the "Dictionary of Medical and Surgical Knowledge" is designed for popular instruction, and not as a work of scientific information, and as very few non-professional persons would have the resolution to undertake what are called "capital operations," or the amputation of limbs, it would be quite out of place to enter at any length into that important branch of operative surgery. Such amputations as a man of nerve might perform in cases of emergency, with some general rules on the subject, will be described and explained, so as to maintain the character of general usefulness purposed by this "Dictionary." As such amputations as an emigrant or traveller would be called upon to perform would naturally be the result of accident,—falls, wounds, bursting of firearms, kicks from horses, &c.,—the observations we have to make will be materially simplified. When the limb or member is by the accident nearly severed from the body, hanging merely by a strip of flesh, and the injury appears too serious to afford any hope of a reunion, and no surgeon can be obtained in a reasonable time to take charge of the sufferer, the friend, having duly weighed all considerations for and against the probability of *saving* the patient's life, should at once *assume the responsibility,* and, having done so, act immediately with coolness and resolution: he must remember he has a duty to society and humanity to perform; and, having accepted it with due reflection, he must steel his heart to pity, forget the suffering he may cause, and go through his task with despatch and firmness. Supposing a party of emigrants are journeying in some remote part of the settlement, and one of the party is kicked by his horse, falls from a tree or precipice, or by any casualty receives a comminuted fracture of the thigh, arm, or bones of the leg, the limb being so lacerated that only a portion of the flesh attaches it to the rest of the body, the points the friend would have to consider, after having attended to the first duties, would be these:—1st. *Is there any chance of a bone so broken, a limb so torn, reuniting and again becoming serviceable?* 2nd. *Has the patient strength and such a state of general health as to give him a chance of resisting the shock to his nervous system by the accident, the operation, and the long subsequent illness?*

If the common-sense judgment of a man of intelligence decides these points in the affirmative, his third inquiry would be—*What conveniences the party possessed, if he succeeded in setting or removing the limb, of conveying the patient in safety to the nearest town or station where surgical help and proper attention could be procured?* and 4th. *Could he bear the fatigue, jolting, and inconveniences of a journey of perhaps some hundreds of miles over a trackless wilderness?* If to all these inquiries his judgment decides that the removal may be effected with the probability of success, he should, after adopting the necessary and primary means, at once, and without any doubtful delay, set out with his charge to the nearest settlement.

If, however, there are circumstances, both connected with the patient's bodily health and the expedition, which would be antagonistic to such a hope, and the whole responsibility of the case must be adopted at once, as an encouragement to the necessary steps it should be borne in mind, that unless surrounded by perfect rest and the conveniences of all surgical appliances, a man with an amputated limb has much better chances of recovery than he who carries about with him a shattered and useless member.

TREATMENT.—As we have said under Accidents, the first duty in all serious casualties is to arrest the bleeding. To effect this, a bandage or neckerchief should be passed round the limb a little way above the injury, and tied tightly, or till the blood ceases to flow: if this cannot be accomplished by this means, a piece of stick is to be inserted in the last fold of the bandage, and one or two turns given to it, so as to establish an effectual compression on the main arteries of the limb.

A few pieces of silk thread should then be got ready, while the operator sits down in front of the limb, and with a sponge, wetted in cold water, removes the clotted blood from the torn flesh, and looks with vigilant eyes for the small mouths of the bleeding arteries, which having discovered by the blood oozing from them, he applies a small hooked instrument, something like a crochet-needle, called a *tenaculum*, and passing it through the vessel, gently draws it out for an inch or two, upon which a friend surrounds it with one of the pieces of silk thread, and ties it carefully and firmly. In this manner the two proceed, till the two, three, or more arteries are all tied; for as the *veins* cease to bleed when emptied, it is both unnecessary and improper to tie them. Care, however, should be taken not to include the nerve in the ligature with the artery. Having effected this necessary measure, the bandage and stick are to be relaxed, to note whether there is any further bleeding; for if the arteries have not been all tied, the blood will leap out again: if it does not, all has been done properly. The bandage may then be left on, but slackened, so that at any moment, should one of the vessels give way and the bleeding recur, it can be instantly tightened. The limb is now to be laid in a convenient position, a cloth dipped in cold water laid over the injury, and the state of the patient looked after. If there is much exhaustion, a cordial or stimulant is to be given, such as a little sal volatile or brandy and water; but if the constitution is robust, and the suffering borne with firmness, stimulants should be avoided, and a draught of water with a little tincture of lavender given instead.

It is now that the self-constituted surgeon has time to think over the probabilities of the case, reflect upon the means at his disposal, and decide upon the measures he must adopt. Should the determination be to remove the patient for further aid, the limb is to be immediately *reduced*, as it is called, as explained under *the head of Fractures*—which see—and the removal commenced immediately: if, however, it is resolved to complete the operation on the spot, the person should bear in mind that his *most imperative duty* is to make as *good and serviceable a stump as the nature of the accident will permit him*, and that, to insure a good stump, there must be a sufficient pad or cushion of flesh left, so as to cover the bone; and if it should be the leg, allow of the pressure of the body without pain or inconvenience. Should a portion of the muscles be left uniting the upper with the lower part of the fractured extremity, this is to be cut in such a manner from the lower portion, that when brought upwards and spread over the stump, it will make a full and efficient cushion. If the injury is in such a situation that *two flaps* can be made, either from above and below, or from side to side, meeting in the middle of the stump, the amputation should be performed in a manner to obtain such a result. As soon as the one or two flaps have been made, the arteries are to be taken up with the *tenaculum*, and tied in the same way as the others,—the bandage, of course, being tightened round the limb *before* the incisions are made. When the extremity has been removed, if the end of the bone in the stump should project in such a manner as to give the cushion, when healed, a pointed appearance, an inch or two should be sawn off, and then the flap—if there is but one—brought over the stump, and whatever the direction in which it crosses, attached to the skin of the opposite side by four or five stitches with a needle and silk thread, each stitch being two or three inches apart. When there are two flaps, they are to be stitched together, up the centre, in the same manner, by interrupted stitches. In either case, the silk threads attached to the arteries are to be brought smoothly and carefully out between the flap or flaps, and left so till the arteries have closed and the ligatures are separated by suppuration: finally, lint dipped in tepid water is to be laid on the stump, a frame placed over the limb to keep the clothes from pressing it, and the patient given a draught of 40 drops of laudanum in a little cold water.

The same means are to be adopted in accidents occurring to the hands, fingers, or toes,—only modified by the minor importance of the locality. In any case, the first duty is to arrest the bleeding; and where there is no tourniquet at hand for the purpose, a compress, by means of a bandage or neckerchief as described, must be substituted; the arteries taken up by the *tenaculum*, or a pair of fine, small *forceps;* a flap secured from some part of the member that must be sacrificed, and the whole dressed and completed as stated above. The taking up and tying of the arteries is the most important part of the whole proceeding, and requires both patience and neatness. See ACCIDENTS, WOUNDS.

AMULET.—A charm; something worn about the neck, arm, on the heart, or other part of the body, to drive away witchcraft, and protect the wearer from disease or evil spells.

In the dark ages amulets were greatly in use, and a profitable trade was carried on by the priesthood and friars in the manufacture and vending of amulets and charms. Amulets were made of stone, metal, wood, and other materials; and as they were received with implicit faith, and worn in general for a special object, it is not remarkable, when we know how deeply the mind was influenced by belief in their miraculous efficacy, if benefit was frequently obtained by the wearing of them. See CHARM, IMAGINATION, TALISMAN.

AMUSEMENTS. See RECREATION.

AMYGDALÆ.—A Natural order of plants, of which the bitter and sweet almond are the best examples. See ALMOND.

AMYGDALINE.—An alkaloid, crystalline substance, obtained from the bitter almond. This article—the active principle of the bitter almond fruit—is a powerful narcotic poison.

AMYLUM.—Starch; the active principle of wheaten and other flours, potatoes, and arrowroot. Starch is only used internally in practice as an injection in dysentery and spasm of the neck of the bladder, when combined with laudanum.

When finely powdered, it is extensively used as a dusting powder for infants, or to cover abrasions, blisters, &c. When scented with perfumes, or mixed with a little powdered orris root, it is called violet powder. Amylum is also valuable as an antidote for iodine. See STARCH.

ANA.—A word derived from the Greek, implying "of each." A term used by physicians in writing their prescriptions, signifying that of this, and the previous article, the apothecary is to take of each so many grains or drachms as has been *expressed; contracted thus—āā.*

ANACATHARTIC.—An old medical term for such medicines as produced an operation the contrary of purgatives; in other words, emetics or antiperistaltics.

ANÆMIA.—Bloodlessness. A disease the opposite of *plethora*, or fulness of blood. By some physicians this is regarded as a diminution of the total quantity of blood in the body, without any change in the constitution of that fluid, and by others as an impoverished state of the blood, and the absence of a large portion of the red globules which give the vital principle to the circulating fluid.

The cause of this singular disease is any excessive loss of blood, as from flooding, an immoderate flow of the periodical secretion, long and improper suckling, scanty and poor food, the suppression of the natural monthly discharge, or any cause that lowers the vital energy.

Women and girls are far more subject to this disease than men or boys.

SYMPTOMS.—General pallor of the skin, gums, tongue, and lining membrane of the mouth,—the whole appearing white or clay-coloured; the lips, tips of the fingers, and those parts usually red, are of an unhealthy pallor; cold extremities, debility, with palpitation and difficulty of breathing; great lassitude, fainting, headache, and small, quick, and feeble pulse; the slightest emotion of the mind producing great exhaustion, depression of spirits, headache, and loss of physical power.

TREATMENT.—If the disease has proceeded from any excessive discharge, the first object is to arrest the cause, and the second to restore the strength, and impart to the blood the vital principles of which it has been robbed by disease. This is to be effected by tonics, stimulants, nourishing diet, and such change of air, with exercise, as the condition of the patient will permit. The diet should consist of a large proportion of animal food, with wine or stout; while quinine and steel, in conjunction with bitter infusions and the mineral acids, should form the chief medicinal means adopted. The following mixtures may be taken alternately every three days, and the sedative draught each night at bedtime, as long as the irritability of the nervous system seems to call for its employment.

Mixture No. 1.—Take of—

Sulphate of quinine . .	10 grains.
Water	6 ounces.

Dissolve, and add—

Tincture of muriate of
iron . . . . 1½ drachms.
Mix: two tablespoonfuls to be given every four hours, in a little water.

Mixture No. 2.—Take of—
Quassia raspings . . . 2 drachms.
Cascarilla bark . . . 2 drachms.
Infuse in—
Boiling water. . . . 1 pint
for six hours; strain, and, when cold, add—
Nitric acid. . . . . 30 drops.
Mix, and give one tablespoonful every two hours.

Composing Draught.—Take of—
Camphor water . . . 1 ounce.
Liquor of acetate of
ammonia. . . . . 3 drachms.
Laudanum . . . . 25 drops.
Mix. Draught to be taken at bedtime.

Where the quinine and steel mixture is obnoxious to the stomach, the same articles may be administered in the form of pills, as in the subjoined prescription. Take of—
Purified sulphate of iron ½ drachm.
Sulphate of quinine . . 8 grains.
Extract of gentian . . . sufficient to make into a mass, which divide into six pills, one of which is to be taken three times a day, with the draught at bedtime. See BLOOD, DISEASES OF.

ANÆSTHESIA.—Loss of sensation or feeling. This is a state of the system that may be produced by the application of sudden and intense cold. The term, however, is now applied to that condition of the nervous system artificially induced by ether and chloroform, to destroy the perception of the pain endured during surgical operations. See CHLOROFORM.

ANALEPTICS.—A class of medicines among the old doctors, supposed to restore the strength of, and nourish, the nerves. See RESTORATIVES.

ANALYSIS.—That branch of chemical science by which compounds are resolved into their primitive parts. The art of discovering the truth or falsehood, possibility or impossibility, of a proposition, and contradistinguished from synthesis, which is the reconstruction of a compound, by the union of its separated elements.

ANANAS.—The name of the pineapple plant. See PINEAPPLE.

ANASARCA.—A Greek word that literally implies a swelling of the flesh. A universal puffiness of the body, or general dropsy of the surface. See DROPSY.

ANASTOMOSIS.—A term employed by anatomists and surgeons to express that union and incorporation of one set of vessels with another, by which the free circulation of the different fluids of the body is maintained. As shown under the article Absorption, the deep and superficial sets of lymphatics, by freely anastomosing, were enabled to bring their fluid from all parts to the thoracic duct; so, by the *inosculation*—growing together, or anastomosing—of the arteries and veins, the perfect circulation of the blood is provided for. If the arms or boughs of two trees are brought together, a small piece of the bark from each removed, and the two limbs bound in close contact, in a few months they will have become firmly united, the sap of one tree passing freely into that of the other. Such a union is an anastomosis; and it is by a similar process with the lymphatics, lacteals, bloodvessels, and nerves, that the great functions which make up the economy of life—circulation, nutrition, and sensation—are carried on.

ANATOMY.—The science of dissecting, or cutting up the body of man or beast, has obtained the name that stands at the head of this article. Anatomy has been divided into simple, or healthy; morbid, or pathological; and comparative anatomy; the first two referring to the human body, the last to the bodies of animals. The study of anatomy is divided into the *Dry Subject*, or the bones—the skeleton: and the muscles, viscera, and all the superstructure of organs, bloodvessels, and teguments, which are denominated the *Soft Subject*. The different bones, cavities, organs, parts, and divisions of the human anatomy will be treated of under their several heads. See SKELETON, MUSCLES, BRAIN, HEART, &c.

ANCHOVY.—The name of a well-known and greatly-esteemed fish of the herring species, caught in great abundance in the Mediterranean. Though only about three inches long, the anchovy is a distinct species, belonging to the genus *Clupea*, and is neither related to the herring nor the sprat. The anchovy is esteemed a great luxury and relish both for breakfast and luncheon, and, as a stomachic and condiment, becomes medicinally an article of consequence. See FOOD. Many preparations are invented, made from this dainty little fish, for the sake of exciting languid appetites, which will be considered under the above heading.

The catching this fish constitutes one of the most picturesque sights to be seen on the waters of the Mediterranean. As night advances, for it is only on dark nights that the anchovy is caught, perfect fleets of small row-boats put out from every creek, bay, and cove along the South Italian shore, and as each tiny craft carries a lighted cresset at its prow, the effect of the multitude of boats; the gleam of the finny prey as they are showered into the craft; the phosphorescent flash of the broken water; the rich points of colour scattered over the picture, as the light falls on some fisherman's red shirt or cap; the multitude of moving boats; the soft, deep voice of the men, as they chant some hymn to their patron saint; the dark sky above, and the almost black stillness of the sea in the foreground, produces a scene of singular interest and attraction. The anchovy, attracted by the light in the boats, rise to the surface in such prodigious numbers, that all the fisherman has to do is to dip in his hand-net, and bale them into his boat in shoals. Though the sprat and sardine are perpetually substituted for the anchovy, no fish is more distinctly marked, and no imposition more barefaced. The sprat and sardine are flat, or straight-backed, and their flesh *white;* the back of the anchovy is high, or rounded, his head is larger, and the colour of his flesh *brown.*

ANCHUSA. See ALKALET.

ANCHYLOSIS.—A fixed joint. In surgery, this term denotes an intimate union or growing together of two bones naturally connected by a moveable joint. Though this remarkable disease may affect every joint in the body, it more frequently affects those of the ankle, knee, and elbow, than those of other parts.

There are two kinds of anchylosis, the false and the true. In the first, there is some little amount of motion in the joint, and a possibility of effecting a cure; in the true, there is not the smallest degree of motion, and the cure is hopeless.

CAUSES.—Sprains, severe contusions, a shock to a joint from a leap, or falling heavily on it; inflammation of the synovial sac or membrane, scalds or burns, acute rheumatism, or the fracture of the bone near the joint, are all causes that have frequently, and may again, produce this disease, which only seems to require a certain amount of injury or inflammatory action at or near the articulation, and keeping it a long time unmoved, or without exercise, to insure the appearance of this most distressing complaint.

SYMPTOMS.—The whole of the symptoms attending this disease may be summed *up into one statement*—inability to move the joint, which gradually progresses, if not attended to, till all motion in the joint ceases, and a stiff limb becomes the consequence.

TREATMENT.—In all rheumatic affections of the joints, inflammations, burns, or accidents affecting a limb, and where the part is long kept at rest, as soon as ever the part may be disturbed, the joint should be gently moved, and every day the same action repeated, till all apprehension has passed. The more violent has been the injury or inflammation, the more dangerous is it to allow the joint *undisturbed rest.* Anchylosis will sometimes follow a severe rheumatic fever in so short a period as eight weeks. The best remedies for a fixed joint, while capable of being remedied, are the Turkish bath once a fortnight; the use, night and morning, of the flesh-brush over the joint; and afterwards, the application of the following embrocation, with constant exercise by flexion and extension, whether the knee or the elbow.

Embrocation.—Take of—

Camphor, cut small . .	3 drachms.
Olive oil	3 ounces.

Dissolve by heat, and add—

Oil of amber, oil of turpentine, and spirits of hartshorn, of each . .	½ an ounce.

Mix. To be used twice a day.

This treatment may be varied, as far as the embrocation is concerned, by substituting a mustard plaster, composed of two parts of flour to one of mustard, which, after retaining it over the joint for twenty minutes, is to be followed by rubbing in a little mild mercurial ointment every night, and constant daily exercise. In general, however, where the disease can be cured, friction, the Turkish bath, the embrocation, and exercise, will effect the cure.

ANCON.—The elbow, or that part of the small bone of the forearm, or ulna, known by anatomists as the Olecranon, which see.

ANCYLOGLOSSUS.—A Greek word for Tongue-tied, which see.

ANDERSON'S PILLS.—The celebrated Scotch physician whose name is attached to these pills, lived in the sixteenth century, and bequeathed to his posterity the *formula* for the pills, which, down to the present time, have maintained their reputation. So great has been the success of these pills, that for years there have been *three* varieties of Anderson's pills sold in the shops, the proprietor of each claiming to be in possession of the original recipe. The real Anderson's pills are composed of Barbadoes aloes, gamboge, jalap, colocynth, oil of aniseed, with lamp black, and beaten with syrup into a hard, close, black mass, which is finally divided into 4-grain pills.

ANDIVA INTERMIS.—The name of a genus of plants, of which the cabbage tree of Brazil and West Indies is the best example. This magnificent tree, growing to the height of 160 and 200 feet, has splendid arms, which, after spreading far out, fall in graceful, feathery plumes, forming a broad sweep of grateful shade, while, springing from the lofty apex of the bole, is the round, white, flaky mass, that, sweet to the taste as almonds, forms the fruit called the cabbage. This is the fruit of the plant, and when cut off, the branches droop, the leaves wither, and the tree dies. The cabbage, as it is called, is boiled and eaten with animal food as an ordinary vegetable.

THE CABBAGE TREE.

The bark, seeds, and leaves of the tree are extremely bitter, and are used in medicine as a *vermifuge*, to destroy worms, for which a decoction of the bark is considered the best. The dose of the powdered bark is from 20 to 30 grains, and of the syrup, which is the decoction sweetened, from ½ to 1½ ounces. In whatever form this drug is given, the dose should commence small, and be *gradually* increased till it produces nausea, when it is to be suspended. See Cabbage Tree.

ANEMONE.—The Wind-flower; so called from a belief that the flowers never open but when the wind blows on them. The leaves were formerly given to females as a remedy for all uterine obstructions, while a gargle of the root was esteemed a certain remedy for all oppressions in the head.

ANETHUM.—The botanical name of the umbelliferous plant Dill, which see.

ANEURISM.—A pulsating tumour distended with blood. Aneurism is a disease peculiar to the circulating system, and to all the arterial vessels. This disease is divided into four varieties,—the True, the False, the Varicose, and the Aneurism by Anastomosis; and is further divided into the internal and external, or those aneurisms which occur in the large cavities, and whose existence can therefore only be conjectured by the symptoms, and such as arise on, or so near, the surface of the body as to be evident to sight and feeling.

A *True* Aneurism is a distention of two or all the coats of an artery at some part of its course, but only affecting a portion of the circumference of the vessel, and into which the blood entering, causes a protuberance or tumour, which pulsates in unison with the artery to which it appertains.

A *False* Aneurism may be called the second stage of a true aneurism; when the tumour, having burst, the blood is diffused into the surrounding cellular tissue.

The *Varicose* Aneurism is an accidental aneurism, caused during the operation of bleeding by the lancet accidentally passing through the vein, and wounding the artery beneath, causing the arterial blood to enter the vein, and produce a pulsating tumour in the bend of the arm.

The Aneurism by *Anastomosis* is an aneurism produced by the union or anastomosing of a number of small vessels.

Causes.—Whatever may be the remote cause, the immediate one appears to be a deposition of calcareous matter, and some diseased condition of the coats of the artery, causing one of them to give way, when the inner coats protrude through the breach, become distended, and form the tumour known as an aneurism.

Persons addicted to spirituous liquors, and who have been in the habit of taking mercury, have been found more liable to *aneurism* than others. Aneurism is a disease more frequently met with in advanced than early life. The vessels most liable to aneurism are the aorta, the subclavian, carotid, femoral, and the popliteal arteries. The latter situation of the disease is the form to which the cavalry soldier is more subject than any other.

Symptoms.—The first thing a patient perceives is an extraordinary throbbing in some particular place; and after paying a little attention, he discovers a small pulsating tumour, which entirely disappears when pressed, but returns again as soon as the compression is removed. The tumour is unattended by pain, or any change of colour in the skin. When once the swelling has taken place, the distention goes on till it has acquired its fullest dimensions. When the disease is situated in one of the large cavities, the aneurism can only be surmised from the consciousness of an unusual pulsation, and pain from pressure on some adjacent organs, difficulty of breathing, cough, anxiety, and a train of painful symptoms consequent on the alarm produced in the mind of the patient, and the difficulty he experiences in certain positions of the body.

Treatment.—For what is denominated internal aneurism, medical science has, as yet, discovered no certain remedy. All that art has been able to effect in the way of remedies have been merely palliatives. Total absence from all occupation of an active nature, the recumbent posture for several hours a day, frequent small bleedings, with doses of fox-glove or digitales, and hydrocyanic acid, have hitherto constituted the treatment of internal aneurism. Pressure long continued has occasionally been found of service in some cases of false aneurism, and for that accidental form of the disease that sometimes occurs from bleeding.

For the external aneurism, whether in the artery behind the collar-bone—*subclavian;* of the neck—*carotid;* or of the thigh and hamstrings—*femoral* and *popliteal,*—there is no remedy but that of cutting down upon the vessel, passing a silk thread round it, between the tumour and the heart, and by tying the artery cut off all access of blood to the diseased part, nature compensating for the loss of a main channel by the enlargement of collateral branches.

Aneurisms are sometimes mistaken for abscesses; and fatal results have followed from ignorant or mistaken practitioners, *under that belief,* plunging a lancet into the sac, a deluge of blood, too late, revealing the fatal mistake.

The pulsation in the tumour, its disappearance on pressure, and the absence of pain, heat, and redness, will always define an aneurism from an abscess.

ANGELICA.—An aromatic, stimulating, and carminative plant, belonging to the Natural order of the *Umbelliferæ,* every part of which, from the seeds to the root, is medicinal, though the latter is the portion of the plant now generally employed. So highly did the doctors of old esteem this aromatic shrub, not only as a tonic and stomachic, a preventive of fever and contagion, but as an antidote to several vegetable poisons, that out of admiration for its manifold and excellent qualities, they called it the "Angelic Plant." The angelica grows wild in any soil, as well as being cultivated in many gardens, and flowers in May and June. An infusion of the root is a warm, agreeable tonic. The tincture may also be taken for the same purpose, in doses of 1 to 2 drachms, though modern medical men have little faith in any of its preparations.

ANGINA.—A name formerly given to some affections of the throat, now understood as malignant sore throat, croup, and some others.

ANGINA PECTORIS, or SYNCOPE ANGINOSA.—This disease, which is more connected with the heart than the chest, and often dependent on ossification, is generally a disease of advanced life, and characterized by the following

Symptoms.—Violent pains across the chest, extending nearly half way down the arm, upon the least exertion, especially upon going up stairs, are among the first evidences of this disease, with an occasional sense of constriction so severe as to threaten instant dissolution unless relieved. So sudden are these attacks, that the patient is compelled to stand still and suspend all motion, when the attack generally passes off. At first, these paroxysms only occur occasionally, and pass away after a few moments of complete rest; but as the disease advances, they recur more frequently, are longer, more severe, and less readily abate; they attack the sufferer in his sleep, or directly on awaking; his pulse sinks, becomes small and irregular; his countenance is pale, the lips dusky; he has cold sweats, an irritating cough, and a thin, viscid expectoration: and this state continues till a paroxysm more violent than the rest terminates a life exhausted by pain and anxiety.

CAUSES. — The heart is always the primary cause of this alarming disease, which proceeds either from an enlargement of that organ, an unnatural accumulation of fat around it, or from a weak and languid performance of its function. The more general cause, however, is either an ossification of the valves, or of the arteries of the heart itself.

TREATMENT.—When called in during an early attack of the disease, the physician, if the constitution will admit of it, should take away about 6 or 8 ounces of blood, bleeding his patient in a recumbent position, and from a small opening, keeping him perfectly quiet, the feet hot, and the rest of the body cool; and for that and the following paroxysms, give the following mixture:—Take of—

Carbonate of ammonia .	2 scruples.
Aromatic confection . .	1 drachm.
Camphor water . . .	7½ ounces.
Compound spirits of ether	1 drachm.
Tincture of assafœtida .	15 drops.
Laudanum	1 drachm.

Mix: three tablespoonfuls to be taken immediately, and one spoonful in an hour if the attack has not passed off, and the full dose repeated on the first recurrence of the symptoms. When the paroxysm is long and severe, a blister, about the size of the hand, should be placed over the region of the heart, the mixture repeated in tablespoonful doses every one or two hours, and the patient kept perfectly quiet. Sometimes the disease is attended and kept up by flatulence, and a disordered state of the stomach; in which case, a compound colocynth pill should be taken occasionally, and a teaspoonful of Gregory's powder in a little peppermint water; or, if that is not convenient, half a drachm of carbonate of soda may be substituted. A fomentation on the chest of hot turpentine sometimes affords relief; and where the blister has failed in yielding benefit, the tartar emetic ointment is to be rubbed over the region of the heart.

During the intermission, a return of the attack is to be prevented by removing all the exciting causes from the patient, by adopting a regimen of most abstemious living, insisting on a vegetable or farinaceous diet, the avoidance of all stimulating liquors and beverages, and by guarding against all emotions of the mind, or subjects of excitement or agitation. In extreme cases, it is sometimes necessary to establish an issue in the back of the neck.

ANGUIS.—The snake. A *genus of* reptiles of the *class Amphibia,—order, Serpents,*—and differs from other species by having the belly and under part of the body covered with scales. See SNAKE.

ANGUSTURA BARK.—A bitter bark, used in medicine as a tonic and stomachic, principally in decoction, and so called from being brought originally from a town of that name in South America. The dose of the powder is from 5 grains to 10.

ANHYDROUS.—Without water. A term given by chemists to articles which contain no water in their composition.

ANIMA.—The wind, breath; the soul, or vital principle of life; and a term applied by the old chemists and physiologists to express real or imaginary properties, as *anima aloes*, purified aloes; *anima pulmonum*, the soul of the lungs, &c.

ANIMAL.—An animal; something endowed with life, and derived from *anima*, the soul, or vital principle. Everything in the material universe is either organic or inorganic, living or dead. All organic bodies are subdivided into two classes, animal and vegetable. The first of these subdivisions is the only subject that properly falls under this head for consideration; all living bodies which appear capable of sensation, ideas, or of feeling, being denominated animals.

Animals are arranged into four principal divisions:—1st, The *Vertebrata*, or animals having a back-bone, or spinal column. 2nd, *Mollusca*, or animals having no internal skeleton, but an external case or shell—like all shell-fish. 3rd, *Articulata*, animals also without an internal skeleton, but with a jointed covering, or a number of ring-like segments, such as worms. 4th, *Radiata*, or *zoophite*.

Each of these divisions has a number of classes; thus, the VERTEBRATA has four classes: 1st, *mammălia*, or animals that suckle their young; 2nd, *aves*, or birds; 3rd, *reptilia*, or animals that crawl; and 4th, *pisces*, fishes. The MOLLUSCA has six classes: 1st, *cephalopoda*, animals whose progression lies in their heads; 2nd, *pteropoda*, those having fins, like wings, on each side of the mouth; 3rd, *gasteropoda*, animals whose organs of progression are under the belly; 4th, *acephala*, such as have no head, as the oyster, muscle, &c.; 5th, *brachiopoda*, such animals as move by arms instead of feet; and 6th, *cirropoda*, animals with fringed feet, like barnacles. The third, or ARTICULATA division, has four classes: 1st, *annelides*, animals with long, cylindrical bodies, with ring-like segments, as the leech and earth-worm; 2nd, crustacea, with a hard, shelly covering, like the lobster; 3rd, *insecta*, or insect class, subdivided into those with wings and those without them; and the fourth, RADIATA, which is also subdivided into several species. Facts connected with man, or the human animal, will be found under the organs, functions, and conditions of the body.

ANIMAL FOOD. See FOOD.

ANIMAL FUNCTIONS. — By this term is understood the duties performed by each organ in the system, as those of the stomach, kidney, liver, lungs, &c. The due and healthy performance of all these functions at one and the same time constitutes the economy of life, and is the mechanism, to speak scientifically, by which the wonderful principle of animal life is maintained.

ANIMAL HEAT.—The property by which the human body is enabled to support life in every climate, under the rigours of an Arctic winter, the scorching heat of a vertical sun, and even immured in an oven, depends upon animal heat, or the amount of caloric generated in the system under all circumstances in which a man may be placed.

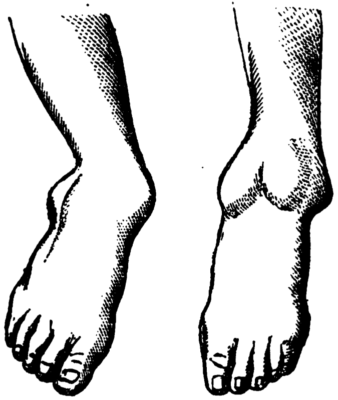
Animal heat is generated at the moment the lungs absorb (in each *inspiration*) the oxygen from the air,—the oxygen uniting with the carbon in the blood, producing carbonic acid, which is given off by *expiration* at the same time that caloric is liberated by the exchange. But as this subject can only be properly understood after a knowledge of the circulation of the blood and the function of respiration, its explanation must be looked for under both those heads. See RESPIRATION, and CIRCULATION OF THE BLOOD.

ANIMATION, SUSPENDED. See DROWNING, HANGING.

ANISE SEED. — A sweetish, warm, and aromatic plant, the *Anisum vulgare* of the Pharmacopœia, and the *Pimpinella anisi* of Linnæus. The seeds of this plant are a warm, grateful carminative, and form an excellent medicine for children, and especially for infants, in correcting that griping and irritation of the bowels to which they are frequently subject. An oil, possessing all the qualities of the plant, is obtained from the seeds, which, with a water made by dissolving a few drops in spirits of wine, mixing it with distilled water, and filtering through magnesia, and a powder of the seeds, *are the only preparations* kept of this *article. An excellent* preparation for children is made by pouring 10 drops of oil of aniseed on an ounce of lump sugar, and then powdering it in a mortar. Half a teaspoonful of this "sugar of aniseed," dissolved in a wineglass of water, makes an effectual draught for children when troubled with colic or any griping in the bowels. Aniseed is often smoked with stramonian in cases of asthma or other affections of the respiratory organs, and with considerable benefit. It also enters into the composition of paregoric, and is largely used in Dalby's Carminative. See CARMINATIVES.

ANISETTE.—A liquor distilled from aniseed, and held in great esteem as a cordial in France and Spain.

ANKLE.—No joint is more subject to injury than that of the foot, both from its bearing all the weight of the body, and being so exposed to accidents from falls and leaps.



No. 1. No. 2.

DISLOCATION OF THE AKNLE JOINT.

No. 1 showing the displacement inwards, and No. 2 the outward dislocation.

The ankles of children are apt to bulge out, or become extremely weak, from the fault of parents placing heavy children too early on their feet, and before the bones have attained sufficient hardness to bear the weight of the frame. In such case, the child must be prohibited from standing, allowed to lie or crawl on the floor, or kept for several weeks on its back. At the same time, the ankles are to be bathed twice a day in cold salt and water, and afterwards rubbed long and steadily with the hand, so as to restore circulation to the part, and stimulate the vessels to increased action. If there is much debility, or a natural weakness of constitution, 20 drops of "wine of iron" should be given in a little water three times a day. See Rickets.

Adults are frequently liable to sprains of the ankle from a twist of the foot in stepping on a stone. When this accident is attended with swelling, a few leeches should be at once placed on the part, and the bleeding encouraged afterwards by towels, folded square and dipped in hot water, being placed over the bites, and the following lotion applied on a folded towel as hot as it can be borne. Take of—

Sal ammoniac, powdered	3 drachms.
Plain or camphor water	1 quart.
Vinegar	4 ounces.

Mix, and make a lotion.

When the pain and swelling have subsided, the muscles of the part are to be strengthened by frequent friction with the hand, and the annexed embrocation used night and morning. Take of—

Camphor, cut small	2 drachms.
Sweet oil	2 ounces.

Dissolve by the heat of an oven, and use as directed; or when there is much pain with the weakness, the following should be used. Take of—

Compound tincture of soap, and laudanum, of each	1 ounce.

Mix, and make an embrocation. The part should be heated by hot fomentations before applying either liniment. See Malformations.

Before attempting to use the foot, a bandage, carried from the toes half way up the leg, should be worn for a few days as a support to the weak ankle. Dislocations and fractures of the bone above the ankle are by no means unfrequent: for the treatment of such accidents see Dislocations, Fractures.

Anatomically, the ankle is what is called a hinge joint—*ginglymus*—and consists in all of nine, though virtually but of three bones—the extremities of the two bones of the leg, the *tibia* and *fibula*, and the *astragalus*, or bone of the heel, into which the other two fit and play, being kept in their place by powerful ligaments.

ANNATTO.—An unctuous colouring matter like butter, the pulp of a West Indian plant, and brought to this country either in round flat cakes or small short rolls. It is extensively used for colouring cheese and butter, and also for dyeing purposes.

ANODYNES.—By this word, which, derived from the Greek, signifies that which allays pain, is understood a very large class of medicines; for as whatever diminishes physical suffering is an anodyne, all narcotics and sedatives must come under the same denomination. The following are some of the most important drugs of this class, though it should be borne in mind that almost all of them, according to their dose, are also narcotics and sedatives, and that it is only in their mildest dose that they become anodynes.

Opium and all its preparations, and salts of morphia, henbane, digitalis, aconite, camomile, hops, hemlock, thorn-apple, camphor, hydrocyanic acid, belladonna, tobacco, poppy, lactucarium, flax, &c. Besides these, there are many other means by which an anodyne effect may be obtained: the extraction of blood from the head by cupping, or the evaporation of ether, will, equally with cold or the inhalation of chloroform, assuage pain.

ANOREXIA.—A medical term for a loss of appetite, a loathing and disgust of food of all kinds.

ANTACIDS.—A class of medicines whose property is to destroy acidity in the stomach or bowels. The most important of these are the three alkalies in most of their forms, with magnesia, chalk, and lime water. An excellent antacid drink for one habitually subject to acidity, is a mixture of an equal proportion of new milk and lime water, taken in draughts of half a tumblerful at a time. See Absorbents.

ANTARTHRITIC.—An old-fashioned term for such medicines as were considered beneficial for the gout.

ANTHELMINTICS.—A class of medicines whose action causes the death or the expulsion of worms from the body.

Among the most popular of these remedies are wormwood, wormseed, Indian pink, rue, fern, cowage, broom, blackthorn bark, sulphur, powdered tin, and lime water: some acting mechanically, and killing the worms by piercing their bodies with the spiculæ, as with cowage and tin—others expelling them alive. See Worms, and Vermifuge.

ANTHEMIS NOBILIS.—The botanical name of Camomile, which see.

ANTHONY'S FIRE, ST. See Erysipelas.

ANTHRAX.—An excessively painful

tumour, of an angry red colour, generally found on the back of the neck, the haunches, or the arm, and from its slow suppuration, great heat, and intolerable pain, has obtained the name it bears, of *anthrax*, or the "burning coale." For cause and treatment, see CARBUNCLE.

ANTIDOTE.—Any remedy used internally or externally to counteract the effects of poison. See POISONS, and each article used as such for its antidote.

ANTIHYPNOTICS. — A term used formerly for a few medicines which had the property of keeping the patient awake —anything that counteracted sleep or dissipated coma.

ANTIMONY.—A metal, and one of the most valuable in the Pharmacopœia. It is of a bluish white colour, brittle, and of a scaly, foliated texture; has a brilliant silvery appearance, but which soon tarnishes when exposed to the air. Antimony derived its name from its effect upon some monks, to whom it nearly proved fatal. A Greek convent in Syria, having received as a present a handsome chalice, supposed to be of silver, the prior placed it upon his chapel altar, and filled it with the sacramental wine, to be used at the forthcoming Supper. Some accident having postponed the ceremony of the Sacrament for several hours, the wine, which had remained all that time in the chalice, had absorbed so much of the properties of the metal, that before the service was over the poor monks who had partaken of the wine were seized with the most alarming symptoms,—the officiating priest being the only one of the brotherhood who was unaffected. From this accident, the metal of which the cup had been made obtained the name of *antimonium*, or "against the monks."

Though occasionally found pure, antimony is usually obtained in the form of sulphuret, from which it is procured by expelling the sulphur by heat. Though largely employed in the arts, it is as a valuable medicine that antimony is so esteemed,—its chief actions on the body being as an emetic, febrifuge, diaphoretic, and purgative: in modified doses, it can also be made to act as an expectorant and a diuretic, and externally as a stimulant. Few drugs have obtained so many names as have been given to this metal and its salts: the most popular of these are the regulus of antimony, Kermes, mineral, litharge, and crocus of antimony, algorath, crude, liver, and flowers of antimony.

The most important preparations of this mineral are the tartrate, or emetic tartar (see TARTAR EMETIC), and the form known as the antimonial powder, being a mixture of oxide of antimony with the phosphate of lime, a compound so nearly resembling the celebrated Dr. James's Powder, that its properties will be treated of under that head, which see. It is this article — under the name of antimonial powder—which will be found so frequently in the prescriptions of this work. Dose of antimonial powder, from 1 grain to 4. The last important preparation is the wine of antimony—*vinum*, or, more properly, *liquor antimonii;* for, as there is no wine used in its composition, according to the "London Pharmacopœia," the term is, therefore, a misnomer, though still retained. The quantity of tartar emetic contained in each ounce of this preparation is 2 grains, and the dose, as an emetic for an adult, half an ounce; and for a child, from one to two teaspoonfuls, according to age; and for an infant, from half a teaspoonful upwards. It is much less as an emetic than an expectorant and diaphoretic, that tartar emetic or its wine is employed. Both the black and the red sulphurets of antimony are used—the latter repeatedly in medicine, but principally to act on the skin in cutaneous affections, the dose being from 1 to 5 grains of the precipitated sulphuret of antimony.

Antimony in all its preparations, when taken in an overdose, is apt to produce very serious effects, not only from its exhausting emetic properties, but from the amount of arsenic often found in combination with it.

Its effect also on the pulse is a remarkable feature in this drug, producing frequently a most depressing influence on mind and body: on this account, a non-professional person should never exceed the dose set down as the sufficient quantity. It is this property of producing sudden and excessive prostration which, in the hands of the practical surgeon, renders antimony so invaluable a drug; for instead of resorting, on every occasion of inflammatory action, to his lancet, and draining the system of its vital fluid, by means of a judicious dose of tartar emetic, with a little Epsom salts and opium, he can as effectually quell the bounding pulse and dangerous congestions of an inflammatory fever, and in a shorter time, than if he had robbed the system of 30 ounces of blood. See BLEEDING. There

other property possessed by anti-
—and one as valuable as any of its
—that of acting as a *rubefacient*,
nter-irritant and blister, when the
te of antimony is mixed with lard
pplied to the skin.

TIPATHY.—In a medical point of
this is a repugnance in the mind
body to certain kinds of medicine,
which, however they may be dis-
l, are sure, when administered, to
it unpleasant consequences. Thus,
constitutions have such a repugnance
timony, opium, and other articles,
in however small a quantity they may
ven, they are certain to produce in-
s consequences. See IDIOSYNCRASY.

TIPHLOGISTIC. — Literally,
inst fire." A term used in medicine
press that mode of treatment adopted
inflammatory fevers, and strictly
aces all bleedings, local and general,
rful purgatives, blisters, and the
cation of cold. The extent to which
ystem was formerly carried, especially
e depleting process, was one of the
est reproaches on the practice of physic.
rtunately, bleeding is not now, as
rly, carried to the verge of homicide
rofessional murder, in obedience to
lind teaching of the schools.

NTISCORBUTICS. — Medicines
t to correct or cure a scorbutic
ncy in the blood. All vegetables
g to this category, especially those
sharp, hot, or pungent character,
as sorrel, horseradish, watercresses,
fruits generally, but lemon and
ge juice more particularly. See
VY.

NTISEPTICS.—A class of medicines
against or to cure and correct
escence. Those are the best anti-
s which most readily absorb the
ture and gases given off in the
ss of putrefaction. Charcoal and
gar are among the best of the class,
gh salt and all the spices are, to a
n extent, agents of this sort.

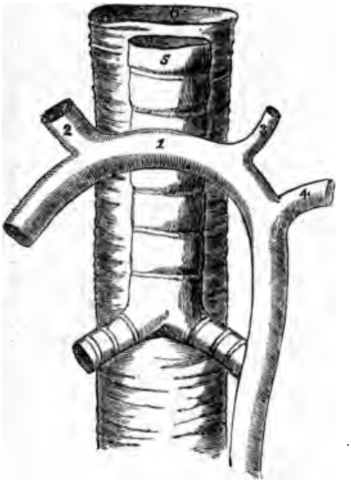
NTISPASMODICS are those medi-
which overcome and remove cramps
spasms. All stimulants are anti-
modics; so also is hot water. But
m, camphor, ether, assafœtida, and
nonia, may be considered the most
t and effective.

NTRUM.—A term used in anatomy
xpress any hollow or cave-like cavity,
s particularly used to indicate the
ties in the frontal bone of the skull,
particularly in *those of the cheek-*bones, the latter being subject to a disease of their mucous membrane, to the formation of tumours, and also to the generation of insects. The diseases affecting this part are so rare, and so purely surgical, that it will be sufficient to say that the general practice is to extract a tooth from the upper jaw, on the side affected, and then, by a sharp pointed instrument, like a bradawl, pierce the thin bone above the place the tooth has been taken from, so as to break into the floor of the *antrum*, and allow the collected matter to escape into the mouth.

ANURIA.—An affection of the bladder. See ISCHURIA.

ANUS.—The termination of the alimentary canal, and the last portion of the *rectum*—the fundament. The anus is subject to several diseases, such as fistula; prolapsus, or falling down; stricture, and piles: each of these will, however, receive consideration under its proper name. Sometimes—but, fortunately, very rarely—a child is born with an imperforated anus,—a membrane covering the external opening,—and still more rarely, there is an apparent total absence of the anus, or else it is singularly malformed or misplaced. But as these are conditions which, when they occur, can only be met by the surgeon, it is unnecessary to refer to them here. So also is the operation of an artificial anus, called for in cases of accident, or where a rupture of the parts in childbirth, or the awkward employment of instruments, occasionally necessitates such an operation. See BOWELS, FALLING DOWN OF; PILES, STRICTURE, &c.

AORTA.—The name of the largest bloodvessel in the body; the great trunk artery, which, rising from the left ventricle of the heart, curves upwards, sending off from its arch the *arteria innominata* on the right side, which subsequently divides into two branches, one to supply the shoulder and arm of that side, the other the right side of the neck and brain. On the left of the arch, the aorta gives off two branches, to supply the left shoulder and arm, and that side of the neck and brain. These four arteries are called the *right and left subclavian*, and the *right and left carotid*. Having supplied the head and upper extremities, the aorta descends in a straight line through the *thorax*, or chest, and abdomen, or belly, giving off branches right and left to nourish the trunk, till, *reaching* the cavity of the hips, or *pelvis*, *after sending* off one or two branches for the adjacent organs, it divides into two large trunks, called the ***right and left iliac arteries***, to supply the hips and inferior extremities. The disease to which the aorta is most subject is Aneurism, which see.



AORTA AND ITS GREAT BRANCHES.

No. 1. Arch of the Aorta. 2. Arteria Innominata, from which is given off the Right Subclavian and Right Carotid. 3. Left Carotid; and 4. Left Subclavian Artery. 5. The Trachea, or Windpipe, with its first division into right and left Bronchial Tube. 6. The Œsophagus, or Gullet.

APERIENT MEDICINES.—A class of medicines which relax the bowels without purging them, and hold an intermediate place between alteratives and purgatives.

Whenever a person takes an aperient medicine, he should be careful, for a day or two, to vary, or entirely change his diet, and thereby assist the operation of the drug; this is a precaution which should never be forgotten. The following list embraces the most useful medicines of this class:—rhubarb, grey powder, sulphur, manna, lenitive electuary, castor oil, seidlitz powders, phosphate of soda, senna, tamarinds, stewed prunes, and such pills as the following:—

Aperient Pills, No. 1, ***mild***.—Take of—

Barbadoes aloes, powdered	24 grains.
Colocynth, powdered . .	9 grains.
Grey powder	24 grains.
Castile soap	enough to

make into a mass. Divide into twelve pills, one or two to be taken for a dose.

Aperient Pills, No. 2, ***strong***.—Take of—

Compound rhubarb pill, and compound colocynth pill, of each.	½ drachm.
Calomel	18 grains.
Oil of carraway seed . .	4 drops.

Mix thoroughly, and divide into twelve pills; one or two to be taken for a dose.

Aperient Powder.—Take of—

Jalap, powdered . . .	1 scruple.
Ipecacuanha, powdered .	2 grains.
Rhubarb powder . . .	5 grains.
Cream of tartar. . . .	1 drachm.

Mix well in a mortar, and take in a small quantity of water the first thing in the morning. Some hot tea or coffee in an hour after will soon cause it to operate.

APHTHÆ. — Wheales, or pimples, formed in the lining membrane of the mouth, tongue, lips, &c. See THRUSH.

APONEUROSIS.—A name erroneously given by the ancient anatomists to what they believed to be a nervous expansion. The term is now confined to a glistening, fibrous membrane, spread over the thigh, and lying between the skin and the muscles.

APONŒA.—A heavy oppression at the chest; great difficulty of breathing. See DYSPNŒA.

APOPLEXY.—The name of this disease is derived from the Greek, and signifies to "strike suddenly." An affection of the brain, that frequently attacks a person in an instant, and prostrates him without warning, as if struck down by a heavy blow. By apoplexy is understood a congested state of the brain, attended by insensibility, coma, stertorous breathing, and, if unrelieved, resulting in death.

Some physicians make several varieties of apoplexy, and class them into cerebral and pulmonary; we shall, however, ignore all such distinctions, and confine our remarks to the two most recognized forms of the disease, the SANGUINARY and the SEROUS.

Causes.—The predisposing causes are, a certain age—between the periods of fifty and sixty years; great obesity, accompanied by a large head and short neck; sedentary habits; indulgence in a full, rich diet, and large quantities of stimulating drinks, especially wine and spirits; suppression of customary evacuations, violent exercise, strong emotions of the mind; while among the immediately exciting causes are a hot bath, mephitic airs, the fumes of charcoal, and some narcotic drugs.

Symptoms.—In general, the attack is sudden, though occasionally there are premonitory symptoms, such as pains in the head, which increase, feeling to the patient as if a cord were drawn across the temples; a confusion of ideas, noises in the ears, flashes of light darting before the eyes, difficulty in articulating words, loss of memory, numbness of the extremities, pallor of the body, nausea, vomiting, and fainting, when the usual characters of an attack occur;—total insensibility, and coma so profound that no noise can rouse the patient; the face is flushed, the eyes dilated and bloodshot, the temporal arteries distended and projecting; the upper lip is protruded with every expiration, while the respiration is carried on in snorts, or stertorous breathing, with foaming at the mouth, and grinding of the teeth, the body, at the same time, being covered with a cold sweat. Sometimes the face is pale, the quick, full, and bounding nature of the pulse, however, sufficiently indicating the state of the circulation.

Treatment.—The first duty is to place the patient in a recumbent position, with the head slightly raised, the coat, neckerchief, and any part of the dress that presses on the neck or throat, removed, and a vein in one or both arms opened as quickly as possible, and the blood allowed to flow till the pulse falls, the pupil contracts, and the breathing becomes more natural. It is only in light cases that perfect consciousness is recovered under the bleeding. In general, when the above effects have been obtained, the bleeding may be stopped, the patient removed to bed, bottles of hot water placed at the feet, cold lotions applied to the head, and two or three drops of *croton oil* rubbed on the tongue, and, in half an hour after, a strong black draught given. The lotion for the head may consist of camphor water and vinegar, or 2 drachms of sal ammoniac dissolved in a quart of water, to which a wineglass of vinegar has been added.

When the case is more serious than such means will properly meet, the head should be shaved, or the hair closely cut, and a bladder of pounded ice laid on the scalp, while mustard plasters are to be wrapped round the feet, and another laid along the back of the neck.

If still more energetic measures are called for, instead of the mustard to the neck, a blister should be applied to the nape of the neck, and in addition to the croton oil, 8 or 10 *grains of calomel put* into the mouth, and the black draught repeated in two hours after the first.

As soon as a powerful action is excited in the bowels, and the mustard to the feet and the remedies to the neck begin to take effect, and the patient appears to recover consciousness, these means may be suspended, and the general state of the body attended to. Sometimes the power of swallowing is totally arrested, when great care must be observed in administering draughts or drinks, and only what the tongue can absorb put into the mouth.

When the exciting cause of apoplexy proceeds from a hearty meal, or a large amount of spirituous liquor, the treatment should commence with an emetic; the following, given in warm water, being the best

Emetic Draught. Take of—

White vitriol	½ drachm.
Tartar emetic	2 grains.

Dissolve in a wineglass of water.

When the patient is recovering, attention must be directed to his digestive system, and the adoption of such means as may tend to ward off future attacks. The circulation is to be kept down by occasional doses of the following mixture. Take of—

Mint water	6 ounces.
Tartar emetic	3 grains.
Tincture of digitalis . .	1 drachm.
Nitrate of potass . . .	10 grains.

Dissolve, and give a tablespoonful every three or four hours. The state of the bowels is to be regulated by proper purgative medicines, and the patient debarred from all animal food, wine, spirits, and malt liquors, and kept, for a time, exclusively on farinaceous food, vegetables, and milk, accompanied by gentle exercise in the open air, and the occasional adoption of the cupping glasses to the temples; and, in obstinate cases, by establishing a seton in the back of the neck, or through the back of the arm.

SEROUS APOPLEXY.—This form of the disease is almost peculiar to extreme age, and consists generally of an effusion of serum on the brain; but as the treatment adopted in sanguinary apoplexy would destroy the patient, the mode of procedure requires to be greatly modified.

Symptoms.—The disease first shows itself by pains in the head, drowsiness, difficulty of speaking clearly, loss of memory, with partial or complete paralysis of a limb, or the entire side of the body.

Treatment.—The patient's feet should be immediately plunged into hot water, mustard plasters applied to the feet and thighs, a blister laid on the nape of the neck, and three or four leeches applied to either temple. The bowels should be acted on by the following pills, and the annexed mixture given at regular intervals.

Purgative Pills.—Take of—

Compound rhubarb pill, compound assafœtida pill, of each	1 scruple.
Calomel	12 grains.

Mix, and divide into eight pills: two to be given every four hours till they operate.

The Mixture.—Take of—

Carbonate of ammonia .	1 scruple.
Camphor water	6 ounces.
Dover's powder	½ drachm.
Spirits of sulphuric ether	1 drachm.

Mix, and give two tablespoonfuls every four hours. For a more complete account of this form of apoplexy, see the article PARALYSIS.

APOSTHUME.—An old professional term for any large swelling; an abscess, or collection of corrupt humour; and sometimes called an imposthume.

APOTHECARY.—By this term was formerly understood a person who merely compounded medicines, made up prescriptions, and sold drugs,—a word analogous to the modern phrase of chemist and druggist. About the beginning of the 17th century, the drug sellers or apothecaries were separated from the grocers, with whom they had been for a long time incorporated as a united guild, and, rising in social distinction, began to exercise the functions of both the physician and surgeon.

The medical education of this new class of practitioners appears to have been extremely crude and limited, and consisted in chief of serving an apprenticeship to some apothecary, and, for a few months of the last year, attending clinical practice in some public charity or infirmary, or what was called "walking the hospitals." The science of medicine consequently became a kind of traditionary practice—a blind following of suit by the pupil of what he had acquired from his tutor. To remedy this defective state of things, many alterations were made in the bye-laws and regulations of the corporation of apothecaries at different times, till 1815, when a new charter was granted to the apothecaries of England and Wales, investing the society, in its corporate capacity, with powers to establish a scheme of education, examine and *pass candidates for a licence to* practise, and to watch over the interests of the apothecaries of England and Wales.

Since 1815, the rules of the Apothecaries' Company have been considerably enlarged, to keep pace with the spread of medical knowledge; the term of study greatly augmented; the branches of information multiplied, and the examination of candidates rendered infinitely more searching, and, for the public safety, far more satisfactory, till, at the present day, the examination for a licence to practice as an apothecary is quite as severe and honorary as that for a diploma of surgeon from either of the Royal Colleges of Surgeons of London, Edinburgh, or Dublin.

An L.A.C., or Licentiate of the Apothecaries' Company, has the privilege of practising in any part of England and Wales, in the double capacity of physician and surgeon, and to recover, in a court of law, his bill, so long as he acts as an apothecary—that is, compounds, in his own house or shop, the medicines he gives to his patients; but if he writes a prescription, sends it elsewhere to be compounded, and accepts a fee for his advice, he oversteps the bounds of his licence, becomes amenable to the court of the College of Physicians or Surgeons, and forfeits his privilege of suing for his bill. See FEES, GENERAL PRACTITIONER.

APOTHECARIES' WEIGHTS AND MEASURES.—This name is given to the standard by which medical men, and all venders or dispensers of drugs, whether solid or fluid, weigh or proportion the quantities of the several articles required in prescriptions, or the making of medical compounds.

The druggist buys his goods by the avoirdupois weight of 16 ounces to the pound, and vends or dispenses his commodities by the apothecaries' weight of 12 ounces. The following tables will show the relative proportion of each part to the whole in both the solid and liquid division, together with their abbreviations and professional signs.

WEIGHTS.

The 1 Pound, equal to 5,760 grains of water, is abbreviated ℔., and indicated thus, 1℔; and divided into—

12 Ounces, equal to 480 grains of water in each ounce, abbreviated Oz., and indicated thus, ℥;

Each Ounce divided into 8 drachms, equal to 60 grains each drachm, abbreviated Dr., and indicated thus, ʒ;

Each Drachm being subdivided into 3

es, equal to 20 grains each scruple,
riated S., and indicated thus, ℈;
ruple being 20 grains.

MEASURE.

contains 70,000 grains of water,
reviated C., for *congius*, a gallon,
ivided into—
containing 8,750 grains in each,
riated O., for *octavius*,—
s divided into 20 ounces, contain-
37·5 grains in each, abbreviated
-

Ounce is divided into 8 drachms,
ning 54·7 grains in each, abbre-
fl. ʒ,
Drachm—equivalent to 60 drops in
rachm, indicated by ♏, minims,
., *guttæ*, drops.
half an ounce or half a drachm
article, whether solid or fluid, is
it is customary to indicate the
by the addition of a double *s*
last figure, as thus — ʒiss, one
and a half—the double *s* standing
is, half. Half an ounce may
expressed in this manner—℥ss,
chms thus—ʒiv., four drachms.
h the term drop will be frequently
this work, the quantity implied
phrase is always meant as *minims*,
ed by the gradients on the small
measure glasses, called the "drop
." The necessity of always
ng the drops will be apparent
is known that the quantity con-
in each drop depends on the
of the fluid itself, the size of the
of the bottle from which it is
, and whether a cork or a stopper
s a medium. As a general rule,
m is half as much more than the
See WEIGHTS AND MEASURES.

AREL. See DRESS.

ARITION. — An appearance, a
object, contradistinguished from
an object seen by the mind, and
ed on the *retina* of the eye, pro-
from the misconception of an
nd resulting from some functional
nce of the mind or other organ of
em. See MIND, IMAGINATION, &c.

ETITE.—The natural desire for
hat condition of the stomach,
in a healthy state of the body,
hes the individual to recruit the
by sufficient and wholesome nutri-

gular appetite, recurring at stated
s in the 24 hours, may be regarded
est and most certain evidence of
l health. Of *healthy appetite it* is quite unnecessary for us to speak; of unhealthy appetite there are several varieties. The chief of these, however, are depraved appetite, the fanciful appetite, and the loss of appetite.

DEPRAVED APPETITE.—There are many phases of this disease, each of them presenting special functional distinctions, from an inordinate appetite, or simple gluttony, to a voracious, morbid, or unnatural appetite.

The *cause* of this disease, in its several phases, proceeds most frequently from an unusual distention or size of the stomach, accompanied with a peculiarly irritable state of the muscular coat of that organ, and an unusual activity of the nerves supplying the different coats of the organ, especially the lining or mucous membrane, causing that preternatural craving to be experienced, which, in some cases, can never be completely satisfied.

The quantity of food or the amount of edible substances consumed by the individual in some cases of *bulima*, or voracious appetite, would seem incredible, if not certified by persons of undoubted veracity. A child of seven years has been known to devour, after a meal sufficient for an adult labourer, a raw rabbit, half a pound of candles, and a large quantity of butter, all in rapid succession. This child—a girl—daily consumed more food than the entire family of five children and the parents, and even then remained unsated. The amount of solid food of every kind, no matter how loathsome, that persons under this malady can consume, is often amazing; the most remarkable feature of the disease being that satiety seems never to be reached, or if for a brief time the ravenous desire seems assuaged, the moment digestion commences—which is almost always strong and rapid—the gnawing stimulus returns, prompting the patient to seize the most revolting substances to appease it. In some cases, where the diseased appetite exists with thickening or *scirrhus*—first stage of cancer—of the stomach, the food, instead of being digested, is, soon after being swallowed, rejected by vomiting,—the patient passing his time between a wolfish craving for aliment, a disgusting gorge, and a casting back of the undigested food.

The *treatment* for this unnatural condition must be as much moral as medical. The first object must be attempted by keeping the patient mentally and bodily employed; by exercise in company, where, by interesting and varied conversation, the mind may be diverted from the contemplation of the stomach; by the use of the cold bath, and vigorous friction over the body with the flesh-brush; and by giving, at short intervals, such food as will necessitate long mastication, such as hard ship or cabin biscuits, and boiled beef; and finally, by extending, gradually, the intervals of eating. The medical treatment consists in the judicious employment of turpentine, grey powder, and soda, in the following manner. Take of—

Grey powder	18 grains.
Dried carbonate of soda	1 drachm.
Powdered rhubarb . .	6 grains.

Mix, and divide into six powders: one to be given every night at bedtime. Take of—

Castor oil	2 ounces.
Spirits of turpentine .	3 drachms.

Mix, and give a tablespoonful in a little water every morning.

Benefit is sometimes effected by disgusting the person with some article to which he is more particularly partial, or by sickening him with his whole meal by secretly mixing a grain or a grain and a half of tartar emetic with his food, and causing him to vomit. This plan, to be effectual, should be repeated after a day or two's intermission; but it must be practised with great care as to the dose of antimony given, and keeping the person in ignorance of the means adopted.

The same means have been found effectual in curing drunkards of their infatuation for certain beverages and spirits.

THE FANCIFUL APPETITE.—There are also several varieties of this condition of deranged appetite; but the most important of these are—1st, those occurring in children, or persons affected with worms; 2nd, attacking young females whose systems have been impaired by the irregularity of the natural secretion; and 3rdly, among females during certain stages of pregnancy. In all these conditions the appetite is extremely various and peculiar: children grope among the ashes, and no intimidation can restrain them from eating the cinders, slate pencil, raw meat, bits of suet, egg-shells, sour apples, and many other crude and indigestible substances; while the manner in which young females will eat lime and chalk is equally noticeable. In respect to pregnant women, the fact of their changeable appetite is well known—showing itself in those extraordinary freaks of appetite, generally *known as "longings,"* in which the female craves for certain kinds of fruits, fish, or meats. See PREGNANCY.

In all these cases the exciting cause is some irritation of the system in one or other of the abdominal organs, producing a preternatural activity of the nerves of the stomach, and causing an accumulation of acrid juices in that organ,—to alleviate which, nature suggests to the sufferer such remedies as contain absorbent properties: these are found in a large proportion in cinders, lime, chalk, egg-shells, suet, &c. The remedies for these conditions of fanciful appetite will be found under the head of Worms and Chlorosis, which see.

LOSS OF APPETITE.—This is a functional derangement that seldom occurs as an original disorder; almost always following inflammations, fevers, and long standing chronic diseases. In such cases, the treatment must be regulated more or less by the nature of the primary cause.

When, however, loss of appetite is the result of old age or general debility, free from any tangible disease, the appetite may be restored, and a general tone given to the stomach, by a course of stomachic tonics, and an occasional mild, warm aperient, by taking out-of-door exercise, by having the meals served at regular intervals, and by never allowing the stomach to be without food for more than four hours at one time.

The *treatment* should commence by taking a compound rhubarb pill night and morning, till the bowels have been acted on gently; when either the following mixture or the powders are to be taken, and persisted in for some time, or till a returning desire for food shows the stomach is gaining strength or tone.

Mixture.—Take of—

Camomile flowers . .	2 drachms.
Ginger root (bruised), Cardamom seeds (do.), Cascarilla bark (do.), of each	1 drachm.
Boiling water . . .	½ pint.

Infuse for 6 or 8 hours, strain, and then add—

Elixir of vitriol . . .	40 drops.

Mix, and take a large tablespoonful every four hours.

Powders.—Take of—

Burnt carbonate of soda	1 drachm.
Powdered rhubarb, powdered ginger, of each	24 grains.
Colombo powder . .	18 grains.
Magnesia, carbonate .	2 drachms.

horoughly, and divide into 12
s, of which one is to be taken in
lassful of cold water an hour before
al, or four times a day.

e same time, care must be taken
e diet; all gravies, broths, or
ishes avoided, and each meal made
as possible on solid food, with a
oportion of juicy animal fibre. See
STION.

LES. — There are nearly 1,500
of this valuable fruit; and of
productions of our orchards, there
ruit more serviceable to the in-
ts of this country than the apple,
as a luxury, but as a wholesome
ritious food.

s contain sugar, gum, a small
of oxalic, and a large proportion
c acid, — that acid principle on
the grateful odour of the fruit
.

apples, in the estimation of some
oners, are considered particularly
esome to persons of weak digestion,
flatulence, pain, and indigestion;
his is a fact, it will generally be
o depend more on the *manner* in
hey are eaten, than from any fault
fruit. All apples contain a large
of *fixed air*, and, if eaten hastily,
p passes into the stomach before
rated,—in which case, when given
the process of digestion, and ex-
by the heat of the stomach, that
naturally becomes distended and
t. A person with weak digestion
first peel the apple, then scrape the
th a knife, and separating the seeds
ous cell-cases, eat the scraped pulp,
lone or on thin slices of bread. In
f these forms, apples will be found
ote digestion rather than impede it.

. peculiarity with this fruit, that,
er it does produce unpleasant
those consequences pass off by
ing its use, and after a few
it may be taken at any hour,
most in any quantity. It is a
of some that apples are most
able when taken in the morning,
eficial in the day, and *hurtful* at
but this, like other popular sayings,
partly true: thousands of French
wiss make a hearty supper of an
nd a piece of bread. It is not in
actice of eating apples, but in the
nal use of them only, that any
resides. When cooked, apples be-
extremely nutritive, as then much
free acid is converted into sugar.

Medicinally, the apple acts as a stomachic, by promoting digestion, and, either raw or boiled, becomes a laxative, especially in the morning; while in its ripe state, it is most beneficial as a grateful and refreshing luxury, correcting the impurities of the blood, and cooling the system. Apples are also admirable as a condiment or corrective to rich food, especially when used as sauce.

There is only one variety of food with or after which apples are *injurious*, and that is, fish. See CIDER, FRUITS, FOOD.

APPOSITE.—A term used in surgery to express the laying together of the fractured extremities of a broken bone in a position as near to nature as possible, so as to insure their reunion. To place in apposition is to adjust the parts as nearly in a natural state as possible.

APRICOT. — This well-known and highly esteemed fruit belongs to the species known as the *Prunus Armeniaca*, of which there are nearly 30 varieties, 15 being native to this country. The apricot is nourishing, sweet, and very wholesome, surpassing the peach, nectarine, and cherry in all its qualities. The Chinese make lozenges out of the clarified juice of the apricot, which, when dissolved in water, makes a very beautiful and refreshing beverage. Like all its species, the kernels of this fruit contain a certain amount of prussic acid. The young shoots of the plant are used as a dye-stuff, to impart a rich, warm, cinnamon colour to wool. See FRUIT.

AQUA.—The Latin name for water. Besides the natural waters, such as spring, river, and rain waters, and the medicinal springs, such as the saline and chalybeate, there are many artificial waters used in medicine. Of the first, the most important are the *aqua fontana*, or fountain water, and *aqua distillata*, distilled water. For the uses and properties of both, see WATER.

For lime water, mint, peppermint, elder flower, cinnamon, and other medicinal waters of that nature, see the different substances named.

AQUAFORTIS.—Strong water. This misnamed article is the strongest and most corrosive of all the acids in the Pharmacopœia, and takes the foremost place among the mineral acids,—aquafortis or nitric acid. For its chemical and medicinal properties, see NITRIC ACID.

AQUA REGALIS, or ROYAL WATER. —So named because it possessed the power of dissolving all the metals, even gold, the best and the most difficult to be acted on of the noble metals. The aqua regalis was a combination of nitric and muriatic acid, or aquafortis and spirits of salt. See Mineral Acids.

AQUA TOPHANIA.—This treacherous and deadly liquid obtained its name from an infamous woman, a native of Palermo, where she was born about the year 1670. Taking up her residence in Naples, she soon made herself universally known as the seller of a secret and deadly poison. This fatal compound, to which her name was ultimately given, is supposed to have been a highly concentrated aqueous solution of arsenic. So potent yet insidious was the effect of the nostrum, that, according to the dose and mode of exhibition, the death of the victim could be calculated to a day; while all but the guilty relative contemplated the doomed friend as succumbing to a slow but mortal malady. So extensive were her dealings, that hardly a noble family in Europe but had to deplore the untimely loss of some beloved friend or relative effected by her agency. After a long career of horrible crime, her iniquitous course was at length arrested, and the infamous woman was brought to justice.

When submitted to the torture, she confessed to having been in the habit of selling, to women, who wished to get rid of their husbands; and to heirs, impatient at their fathers' length of years; and to others, who had relations or enemies they wished removed, her deadly compound, giving in a list of *six hundred* persons of both sexes who had perished by her means. See Arsenic.

AQUA MIRABILIS, or Wonderful Water.—A stimulating cordial, made by distilling water in which cloves, cubebs, mace, nutmegs, ginger, and some other spices have been boiled.

A wineglassful of this cordial was some years ago held in great esteem for colic, flatulence, and faintings.

AQUA VITÆ.—Water of life; usquebaugh. The national spirit of any country has received this general name, whether brandy, schiedam, or whiskey. Any ardent spirit.

AQUEOUS HUMOUR.—One of the humours of the eye, lying in the anterior chamber of that organ, immediately behind the cornea. See Eye, Anatomy of.

ARACHNITIS.—A name sometimes given to inflammation of the membranes of the brain. See Brain, Inflammation of; Meningitis.

ARACHNOID MEMBRANE.—One of the three investing membranes of the brain; so called from the extreme delicacy of its texture, being literally as delicate as a spider's web, from which it derives its name of arachnoid. See Brain, Anatomy of.

ARDENT SPIRITS.—Any distilled spirit, containing a large amount of alcohol, such as brandy, rum, gin, whiskey, arrack, &c. All ardent spirits are, when judiciously taken, both valuable stimulants and tonics, and their effects on the human system in certain cases of debility, or malignant disease, extremely beneficial; but when taken to excess, or in an overdose, their results are not only dangerous, but often fatal.

The consequences of a free indulgence in the use of ardent spirits are of the most distressing character: emaciation, loss of appetite, nervous tremors (especially of the hands), loss of memory, paralysis, and often *delirium tremens*, or trembling insanity, and congestion of the brain, or serous apoplexy.

In a large dose, most of the ardent spirits act as a narcotic poison, affecting the brain, and producing coma, insensibility, and sometimes apoplexy.

In such cases, the first duty is to unload the stomach of the spirit, which, while remaining there, acts on the system as a poison. This necessary measure should be effected, if possible, by means of the stomach-pump; afterwards cleansing the organ by pumping in some warm water, and then drawing it off again, till all the spirit has been removed. When the stomach-pump cannot be obtained, an emetic of half a drachm of white vitriol should be given in warm water, or else vomiting excited by tickling the gullet and uvula with the feathery end of a pen. See Drunkenness; Poison.

AREOLA.—A word derived from the Latin, the diminutive of *area*, a void, open space. The brown circle which surrounds the nipples of females, and a part of a peculiarly organized tissue. The areola of the female breast undergoes particular changes during the periods of pregnancy and suckling, and from possessing a remarkable sympathy with the womb, has generally been regarded as one of the series of symptoms indicative of pregnancy.

AREOMETER.—A small, delicate instrument to measure and ascertain the specific gravity of any fluid lighter than water.

ARGENTUM.—Silver. Many preparations of this—one of the noble metals—are in use in the practice of physic, such as the oxide, cyanide, and nitrate; but as they all possess the same, or nearly the same, medicinal properties, and the nitrate of silver is the best and most manageable, that is the preparation generally used. See LUNAR CAUSTIC, and NITRATE OF SILVER.

ARGIL, ARGILLA, OR ARGOL.—A fine white clay, used in the manufacture of crockery. See ALUMINA.

ARM (The) comprehends the whole of the superior extremity, from the shoulder to the fingers, and, anatomically considered, consists of 30 bones; but, in its more limited sense, is confined to what is called the arm proper, and the fore-arm. The arm proper has only one bone—the *humerus*—attached at its upper extremity, by a ball and socket joint to the shoulder blade; and at its lower extremity, by a species of hinge joint, to the bones of the fore-arm, which extends from the elbow to the wrist. The fore-arm consists of two bones, the *radius* and *ulna;* the former the external, and the larger of the two bones; the latter internal, and the smaller. The fore-arm is connected above with the lower extremity of the *humerus*, or bone of the arm, forming the elbow joint, and below to the double row of small bones composing the wrist. For the remaining portions of the superior extremity, see SHOULDER, HAND, and SKELETON.

Both portions of the arm are more subject to fracture, or the breaking of their different bones, than any other part of the body. The *humerus*, or bone of the arm, may be broken in any part of its length, though the portions most frequently fractured are about three inches below the head, about the same distance above the elbow joint, or its lower extremity, and across the middle of the shaft.

These fractures may be either *transverse* or *oblique*. When transverse, or completely across the bone, there is seldom much, if any, displacement of the parts; whereas, when the fracture is in an oblique or splintered direction, in consequence of the opposite muscles pulling in contrary ways, there is much displacement and shortening of the limb.

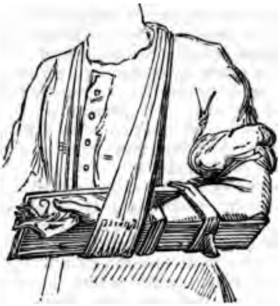
INDICATIONS.—Instant loss of power, pain, and a grating noise heard when the arm is moved *or examined, caused by* the two ends of the bone rubbing on each other; and when the fracture is oblique, by the shortening of the limb.

TREATMENT.—The patient being seated in a chair, one person is to grasp the broken arm firmly with both hands, *above* the fracture; while the operator, bending the fore-arm at a right angle with the arm, takes hold of the limb *above* the elbow with his left hand, and as he holds the fore-arm with his right, gradually and carefully pulls down or extends the arm, till the edges of the bone are brought down to be in exact apposition, or in their natural situation; two pads, or long, narrow bags, filled with wool or bran, are then to be laid one on each side of the fractured bone, and over each a splint is to be placed; and while the operator keeps the whole firmly together with his hands, the assistant is to tie the splints securely by two or three pieces of strong, broad tape; the fore-arm is then to be bent at right angles, and supported in that position by a handkerchief from the neck.

The two bones of the fore-arm are, either separately or together, extremely liable to be fractured; and though across their middle is the portion most frequently broken, the injury may occur in any part of the shaft of either.

From falls, blows, and casualties with machinery, and from some other causes, the bones of the fore-arm are very frequently broken, and, like the bone of the arm, may be fractured either obliquely or transversely. The *radius*, however, or larger of the two, from being on the outside, and more exposed than its smaller and inner companion, is the bone most frequently injured. When the accident has been severe, or the fall considerable, both the *radius* and *ulna* are snapped at once,—the lower third of either bone being the part, after the middle, where the fracture most generally occurs. The INDICATIONS are almost the same here as in the arm proper—loss of power, and pain, when the fracture is transverse, and displacement and shortening when both bones are broken obliquely.

TREATMENT.—There are no bones more easily set than those of the fore-arm, and the operation may be performed by the merest tyro with perfect propriety and neatness, if the following rule is first attended to:—*The fore-arm is to be placed halfway between pronation and supination, or in an edgeways position, the thumb being uppermost.* By this simple precaution the bones are placed in their natural situation; when all the operator has to do further, is to pass his thumb and fingers along the ridge of the upper bone, or *radius*, and in the same manner up the course of the *ulna*, to satisfy himself that the bones are in apposition, and lie smoothly, before applying, as in the case of the arm proper, two long, narrow pads or bags filled with wool or bran, one on either side of the fore-arm, laying on the splints, and securing the whole by three or four pieces of strong tape passed round the whole, and securely tied in a bow. When the fracture has been oblique, the operator, having placed the fore-arm with the thumb uppermost, must gradually extend or stretch the limb, while an assistant steadies the arm by holding the upper or elbow portion firmly in his two hands, till, having got the ends of the fracture in direct contact, he is to apply the pads, and finally the splints. It must be borne in mind, however, that the *extension of the limb is only to be made while the arm is edgeways, or the thumb uppermost;* and that if these directions—simple as they are—are *not complied with,* the arm will not only be set improperly, *but the bones will be actually twisted, and the member rendered almost useless for life,* unless the person submits to have it broken again and reset. When applying the splints, care should be taken that the longest splint is placed outside, which should extend from the elbow to the points of the fingers, while the inner one or shorter splint reaches from the bend of the elbow to the termination of the fingers, the hand being extended, and all movement of the fingers suspended for some time. The *fore-arm is then to be bent,* and suspended in front of the chest by means of a sling from the neck. See Fractures, Splints, and Pads.



FRACTURED FORE-ARM.

ARM-PIT, OR AXILLA.—This, surgically and anatomically considered, is one of the most important parts of the body, from the size and importance of the vessels that lie within its deep triangular cavity. These consist of the main artery, vein nerve, lymphatic tubes, glands, and plexus of nerves,—all the vessels, in fact, passing out of the body on their way to supply the whole of the arm and part of the shoulder with life, sensation, and motion. The arm-pit is subject to several diseases: the most frequent, however, is an enlargement and sometimes a suppuration of the lymphatic glands which lie in its cavity, and which, in scrofulous persons, are liable to put on a diseased action. They also suffer by sympathy with diseases of the female breast—especially in cases of cancer—when the glands of the arm-pit becoming affected, prognosticates an unfortunate termination of the disease. See Cancer; Glands, Enlargement of, &c.

ARMARIUM UNGUENTUM.—A sympathetic ointment or weapon salve, by which, in the Middle Ages, wounds were said to be cured—no matter at what distance the sufferer might be—by simply applying this marvellous unguent to the sword, dagger, or weapon by which the wound or injury was inflicted. See Sympathy; Charm; Imagination.

ARMORACIA RADIX. See Horse-radish.

ARNICA MONTANA.—The Leopard's Bane, or Mountain Arnica; a medicinal plant, a native of the northern parts of England, and now generally cultivated for the sake of its petals in most of our gardens. The arnica is a perennial plant, and flowers with a yellow, copperish-coloured blossom; most parts of the plant having an aromatic, bitter, pungent taste, the root being particularly bitter and acrid.

The leaves and flowers are narcotic, diaphoretic, and stimulant, and, in a large dose, emetic, and have been given in convulsions and neuralgic diseases. In an excessive dose, the arnica acts as a violent narcotic poison. The dose of the powdered leaves is from 5 to 10 grains, gradually increased.

The Germans use the powder of the dried root as a substitute for cinchona, or bark, and the dried leaves, when powdered, as a snuff or errhine.

AROMA.—An odour; any grateful smell or perfume given off by fruits, flowers, gums, and other substances.

AROMATICS.—By this term is understood all that class of drugs which have a warm, grateful, and slightly stimulating character. All the spices belong to this order of medicines, some of the barks, the essential oils, and a large number of our garden herbs, such as the mints, thyme, &c. See CARMINATIVES.

AROMATIC VINEGAR.—This well-known, pungent, and grateful stimulant, so generally used in the vinaigrette and on the toilet, is made by dissolving camphor, the essential oils of cloves, mace, lavender, and rosemary, in the strongest vinegar or acetic acid. Aromatic vinegar, in consequence of the highly stimulating nature of the acetic acid, and the strength of the oils, is extremely dangerous and corrosive, and, if taken into the stomach, acts as a corrosive, irritant poison; or, if applied to the skin, first blisters and afterwards destroys the texture of the cuticle.

ARROW-ROOT.—This well-known farinaceous food is the grated root of the plant known as the *Maranta arundinacea*. Arrow-root obtained its name from a mistaken belief that it was the sap from the root of this plant that the Western Indians were in the habit of employing for the purpose of counteracting the deadly virus of the poisoned arrows used by the Indians in their warfare. Arrow-root, when pure, is almost a perfect starch, and, like that article, from whatever vegetable obtained, coagulates, when mixed with water at a temperature exceeding 180 degrees of Fahrenheit.

Arrow-root has been regarded as a light, nutritious, and easily-digested food, and as a most valuable diet for invalids and infants,—an opinion that has prevailed far too long; for as starch contains no animalizing principle, it cannot be given as a continuous diet, in either condition of life, with justice or propriety; for though some children may appear to thrive for a time on a dietary of arrow-root, it too frequently proves a source of acidity and flatulence to be prescribed as a general aliment.

Few articles have been more adulterated than arrow-root. The least objectionable of the articles used for this purpose, though decidedly injurious, as far as the integrity of the substance itself is concerned, are potato flour, powdered sago, and rice. For a *more complete account* of the properties of arrow-root, see FOOD, STARCH, and FARINA.

ARSENIC.—This virulent and mortal poison is found in almost every part of the world, and to a very large extent in the mines of Devonshire and Cornwall; almost always in combination with other metals, and but rarely pure and uncombined; but, when so found, forming distinct and peculiar veins.

Arsenic is most generally obtained by sublimation from the salts and oxides of iron and silver, with which it is either combined with sulphur or oxygen, in the form of sulphurets or oxides of those bases, or else acidified, and in connection with lime and copper, iron, lead, and cobalt, as the arsenate of each. Metallic arsenic, when found pure, is of a bluish grey colour, like steel, having considerable brilliancy, but quickly tarnishes, and becomes black by exposure to the air. In its pure metallic state arsenic has *no effect* on the animal system, being perfectly inert and harmless; but if volatilized by a heat of 356 degrees, it becomes a dense, white fume, giving off a strong odour of garlic; at the same time passing into that form which is commonly known as the white oxide of arsenic, the most virulent of all our metallic poisons.

Arsenious acid, or white oxide of arsenic, is most frequently obtained, for the purposes of the arts and for medicine, by roasting the arsenate of cobalt by means of an intense degree of heat; from this arsenious acid, or white arsenic, the other preparations are procured.

There are two or three preparations of arsenic combined with different proportions of sulphur, in the form of sulphurets, such as the red and yellow sulphurets of arsenic, commonly known as realgar or red arsenic, and king's yellow; all of them used as pigments. The only medicinal preparation is Fowler's solution of arsenic—the *liquor potassæ arsenitis*—a watery solution of the white oxide of arsenic; a certain proportion of potass being added to insure the complete solution of the mineral, and a little spirits of lavender finally mixed, to give the whole the red colour it possesses, and prevent its being mistaken for water. Fowler's solution contains 1-120th part of a grain of the white oxide in one drop of the solution.

Medical uses.—Arsenic is used medicinally as a tonic and corrective in cases of leprosy, chronic rheumatism, St. Vitus' dance, ague, obstinate skin diseases, and in paralysis or neuralgic affections, and sometimes as an external application, in the form of ointment, in cases of cancer, or to destroy morbid growths. Arsenic is a powerful *depilatory*—hair destroyer—and has sometimes been made into a soap, to avoid the necessity of shaving: a lather of such a soap being rubbed on the chin, and allowed to remain a short time, removes the beard without a razor.

In all cases arsenic requires to be exhibited with great care and judgment.

It should *never be given on an empty stomach, but always directly after a meal; it should not be given to full-bodied or apoplectic individuals; and, when taken for a course, should never be continued for more than ten days at a time,* when its use must be discontinued for five or six days,—the patient, on each resumption of the arsenic, beginning, *de novo,* with the smallest dose, and, as at first, gradually increasing the quantity.

The moment any of the following symptoms show themselves, the drug must be instantly stopped, whether the ten days have been reached or not; for so apt is arsenic to accumulate in the system, that to persevere in its use after being admonished — either by griping pains in the stomach, heat and dryness in the mouth and eyes, itching of the skin, flushed face, inflamed eyelids, giddiness, and a sense of fulness in the head —would be a course highly reprehensible.

Dangerous as the use of arsenic is, and universally known as its effects on the body are, persons have not been deterred from using it for the most extraordinary purposes. The female sex in particular have employed it—and to an extent that seems incredible — as a cosmetic, or a beautifier of the complexion. For this purpose the ladies of Croatia, Styria, and other parts of the Austrian empire in particular, have long employed it; though the custom, unfortunately, is by no means confined to that portion of Europe, as the ladies of France and this country are far from being ignorant of its use and supposed effects.

The "arsenic eaters," as those persons have been called who have accustomed themselves to take this powerful mineral, entertain a belief that if its use is persisted in for a sufficient length of time, it will produce a fulness of the face, add lustre to the eyes, and impart a downy bloom and freshness to the countenance.

For these questionable advantages—even supposing such results are ever *obtained—thousands of females* are content to incur the risk that always attends the employment of this fatal poison. That arsenic exercises some influence on the skins of all animals, may be inferred from the fact that many of the continental grooms and ostlers give arsenic to their horses to improve and beautify their coats; a result that, as regards the horse, can be obtained far better, and without any hazard, by the use of salt, wormwood, or tansy.

In the remarkable trial which occurred a few years back at Glasgow, where Madeline Smith was accused of having poisoned a young Frenchman, one of the proofs against her—as it traced to her the possession of arsenic—was the admitted fact that she was in the habit of taking that mineral as a cosmetic. No female, however, not utterly blinded by vanity, or who still regards her mental and bodily health as the greatest blessing bestowed by her Creator, would ever wilfully expose herself to the danger that might attack her at any time, if addicted to so injurious and unworthy a practice.

POISONING BY ARSENIC.

The ease with which this mineral, from its extensive use in the arts, can be obtained, has been the reason why it has been so universally selected as a means of death, both by the suicide and murderer. To check the evil resulting from the facility of obtaining this poison, and the repeated accidents arising from its colour, a recent Act of Parliament compelled all chemists to vend it in future mixed only with soot, ivory black, or charcoal,—a precaution which, it is hoped, will have the effect of preventing accidental poisoning by this means, as its colour must henceforth detect its presence, or at least awaken suspicion, and cause inquiry,—so many fatal cases having formerly occurred from the accidental mixture of the white arsenic with flour and other edible substances.

Symptoms.—These usually commence within from fifteen minutes to half an hour after swallowing the poison; the time, however, will greatly depend upon the constitution of the person, the quantity of the drug taken, and whether the stomach is full or empty at the time. The first indication of the poison is a sense of dry heat in the mouth and gullet, soon extending to the stomach and bowels, with flying pains, cramps, or spasms; after a time the heat becomes intense and burning, accompanied with a constriction of the throat, a fulness of the head, and sense of pressure across the brow and temples, as if a string was drawn violently tight round the part. The pain of burning heat increases; the skin feels as if too small for the body, and about to burst with the distension. The eyes and nostrils become red and inflamed, and an intolerable itching breaks out over the face and neck. The latter symptom is soon followed by vomiting, and almost directly after by purging, which, at first watery, soon becomes of a green, feculent character, streaked with blood; the pain, accompanying both the vomiting and purging, being increased by the cramps and spasms of the legs and stomach. The thirst of the patient is excessive, the face appears shrunk and anxious, a cold sweat breaks out over the body, and the sufferer compares the heat he endures to a raging fire in his stomach.

Treatment.—The great danger resulting from poisoning by arsenic resides in the fact of its rapid absorption into the blood, and its after effect on the nervous system; and as we do not as yet possess any article that will immediately decompose or neutralize the arsenic, no reliance can be placed with safety on what are called antidotes for this poison. The first step to be adopted, whether by a non-professional person or a medical man, is to empty the stomach, and that by the speediest possible means. This result can be effected in two ways—either by the use of the stomach-pump, or by emetics.

When the stomach-pump—the most effective means—is adopted, the stomach is to be alternately filled with water, emptied by the pump, filled again, and again discharged of its contents, and these processes repeated as long as the circumstances of the case seem to require. When, in the absence of the stomach-pump, the surgeon is compelled to resort to emetics, he must be careful, in the first place, *not to use* articles which are likely to *relax the system, and induce absorption:* on that account he must *avoid* both tartar emetic and ipecacuanha; and secondly, select such emetics as are the easiest dissolved, and act most speedily. Of these, the best are —1st, sulphate of zinc, or white vitriol, of which the dose is 20 grains, dissolved in a cupful of warm water; 2nd, mustard; a dessertspoonful mixed in a basin with half a pint of warm water, and taken immediately; and 3rd, sulphate of copper, blue vitriol, or bluestone, of which the dose is 10 grains, bruised and *dissolved in a* cupful of warm water. Immediately on being called to a case of poisoning by arsenic, one or the other of these emetics should be instantly given, followed by warm water, to encourage the vomiting. If neither the white nor blue vitriol can be procured, mustard, which is generally at hand, is to be substituted; only, in giving it, the patient's nose must be pressed between the fingers while he is drinking, and he must be made to take the whole at once, as it is seldom possible to induce a patient to take a second draught of liquid mustard.

Should vomiting not immediately follow the emetic, the root of the tongue and uvula must be tickled with a feather, or, if necessary, the finger pressed on it. As soon as the first contents of the stomach have been ejected, copious draughts are to be given of either sugar or honey and water, lime water, milk, linseed tea, gum and water, or the white of eggs. Whichever article is employed, or if all are used in succession, after each time of filling the stomach the finger or the feather must be used to empty the organ, and this continued, till it is reasonable to suppose that all the poison has been thrown off.

So violent sometimes is the irritation produced by arsenic, that inflammation of the stomach and bowels, with severe nervous disturbance, succeeds, in which case it is necessary to bleed both locally and generally, use the hot bath, and administer injections. If the inflammatory action runs high, from 8 to 10 ounces of blood must be taken from the arm, a number of leeches applied to the abdomen, round the navel: the patient is then to be placed for *five or seven minutes* up to the neck in a hot bath, and, half an hour afterwards, an injection, composed of half a pint of warm starch, to which 10 drops of tincture of assafœtida and 40 drops of laudanum have been added, is to be thrown up the bowels by means of an enema syringe.

In most cases, after the arsenic has been expelled from the stomach, the warm bath and the above injection will be found of great benefit. The convalescence is generally both long and tedious, particularly so when the nervous system has been much affected. The diet, during the whole time of recovery, must be extremely light, and free from all cause of irritation—consisting of milk, gruel, cream, rice, and such farinaceous foods and bland beverages: the bowels are to be kept open by small doses of Epsom salts and carbonate of magnesia, combined in the manner given below. Take of—

Epsom salts	1 ounce.
Carbonate of magnesia	3 drachms.
Peppermint water . .	6 ounces.

Mix in a mortar, and take two tablespoonfuls every other morning; while to relieve the colic pains and irritation often felt for a length of time subsequently, the following mixture is to be employed:—

Take of—

Carbonate of ammonia	1 scruple.
Aromatic confection .	1½ drachms.
Prepared chalk . . .	4 drachms.
Mint water	5 ounces.
Tincture of bark (compound)	1 ounce.
Laudanum	1 drachm.

Mix. A tablespoonful to be taken once or twice a day, according to circumstances; and when there is much restlessness and loss of sleep, a suppository of 4 grains of solid opium is to be placed in the bowel on going to bed every night. See Poisons.

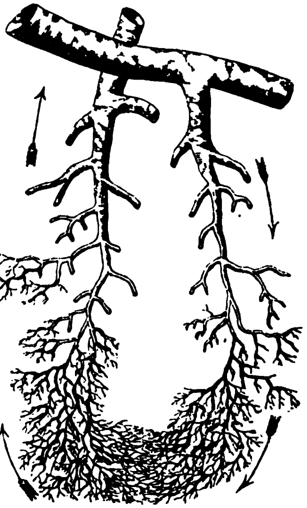
The hydrated sesquioxide of iron has been employed as an antidote in cases of poisoning by arsenic, being supposed to act chemically on the arsenic, and render it inert; but as it requires to be given in large doses, and should only be employed by a medical man, and as it in no way sets aside the *necessity* of an emetic, and must itself be afterwards expelled from the stomach, we have not introduced it as a reliable means for the non-professional person to employ. All the preparations of iron, during convalescence, will be found highly beneficial. See after-treatment of corrosive irritant metallic poisons, under the head of Poisons.

ARTEMISIA. — The botanical name of the plant called Wormwood, which see.

ARTERIAL BLOOD. — The blood circulating in arteries. Arterial blood is easily distinguished by its bright crimson colour; by being slightly higher in temperature than venous, or the blood of veins, which is of a dark purple colour; and still more stongly marked by always gushing out *in leaps and jerks*, while that from a vein flows without motion, like any ordinary fluid. See Blood. Arteries are subject to inflammation, ossification, and aneurism.

ARTERIOTOMY.—The operation of opening an artery for the purpose of taking away blood for the relief of disease affecting the artery.

ARTERY. — A bloodvessel, so called from an erroneous belief entertained by the ancients that all arteries *contained air*. An artery is a long, slender, *pulsating* tube, capable of considerable extension and contraction, and organized to bear compression without any particular injury. Anatomically, an artery consists of three coats: an external, or cellular coat, which gives the principal strength to the vessel, and is the seat of its *elasticity;* a middle, fibrous, or muscular coat, composed of concentric fibres, which, being firm and elastic, gives the *contractile* property to the tube; and an internal, consisting of thin, white, transparent fibres, forming the finest, yet most resistant of the three coats.



ARTERY TERMINATING IN, AND VEIN RISING FROM, THEIR CAPILLARIES.

The arteries constitute one of the most important systems of vessels in the animal economy, and are the channels by which the vital fluid, and the whole nutritious principle of the body, is carried on. The aorta is the parent artery, from which all the others, directly or indirectly, arise, and is connected with the *left side* of the heart. See Aorta. Arteries *diminish* as they proceed, passing from trunks to branches, and further on to twigs and filaments, till they finally terminate in a perfect network of the most minute ramifications, so fine as hardly to be visible to the naked eye, and anatomically known as *capillary* vessels, from the opposite extremities of which the minute ramifications of the venous system commence, and which, contrary to the arteries, *increase* as they proceed, from twigs to branches, and eventually to trunks. Arteries are always accompanied by veins, which generally bear the same name as the artery. The chief exception to this rule is in the great trunk vessels of the chest and abdomen, the general principle being, that as the artery conveys the vital fluid to a part, the vein, bringing back the impoverished blood, accompanies it; running either above or at the side of the artery.

Arteries can always be distinguished from veins, in the living body, by their pulsation, or the contraction and expansion of their tubes, which, in exact harmony with the same action of the heart, propels the blood through all their channels, with the same regularity and force at the extremity of the body as at the fountain-head of circulation—the heart itself. This double action of the arteries—contraction and expansion — constitutes what is familiarly known as the *pulse*. See PULSE.

The blood sent out by the heart is distributed to every part of the body by the arteries, their great elastic properties admitting of their expansion both transversely and longitudinally. It is owing to this remarkable elasticity in all arteries (by which the blood is propelled forward) that these vessels are always found *empty after death*, their contents being forced, at the moment of dissolution, into the capillaries and veins.

ARTHRITIS.—Articular rheumatism, or rheumatism attacking the joints. The old medical writers used this word to express that condition of gout called wandering, or retrocedent gout, moving from one locality to another, Its signification is now confined to acute rheumatism. See RHEUMATIC FEVER.

ARTICHOKE.—An edible but flatulent vegetable, eaten with salt and pepper, and botanically known as the *Cynara Scolymus*. A variety called the Jerusalem artichoke, *Helianthus tuberosus*, is much more esteemed than the ordinary variety. The roots only of this plant are used; and these, being boiled and mashed like potatoes, the flavour of which they greatly resemble, are eaten as a superior kind of vegetable. See FOOD.

ARTICLES NECESSARY FOR EMIGRANTS. See EMIGRANT.

ARTICULATION.—*The joints of the body are called the articulations.* Anatomists distinguish the articulations into four kinds: 1st, the BALL AND SOCKET JOINT. *enarthrosis*, of which the shoulder and the hip joints are the best example: 2nd, the HINGE JOINT, *ginglymus;* the elbow joint is the most perfect example of this variety: 3rd, the MIXED JOINT, *amphiarthrosis;* an articulation which admits of only a limited motion, as that of the vertebræ, or backbone; and 4th, the IMMOVABLE JOINT, which is divided into three varieties; the joint by *dovetailing*, as in some of the bones of the head; the joint by *overlapping*, or close-fitting, as in the temporal bones of the skull, and those of the face; and the *nail-like* joint, as shown in the articulation of the teeth in their sockets.

An articulation consists of the bones forming the joint; the cartilaginous lining, covering the articulating surfaces of the bones, to prevent the consequences of friction; an intermediate cartilage, to receive and weaken the shock or force applied to the joint, as in the vertebræ, and which, when pressed, gives out an oily fluid, which lubricates or moistens the joints. The articulation further consists of a number of ligaments, divided into the capsular, a ligamentous membrane, entirely surrounding and shutting in the joint and its synovial sac, a fibrous bag, containing a fluid sometimes called the joint-oil; the connecting ligaments, externally binding the bones together; the crucial ligaments; the lateral and transverse ligaments; all of which admit of motion in particular directions, or strengthen the articulation generally. See JOINTS.

ARTIFICIAL RESPIRATION.—By this term is understood the process by which breathing is attempted to be restored in a person supposed to be dead, or in whom the natural function of the lungs has been suspended. The means generally adopted for this purpose consist in applying heat to the body, and endeavouring to excite the lungs to action by inflating them with air by means of a pair of bellows, and then, by pressure, expelling it. Feasible as this plan at first sight appears, it is often mere lost time to adopt it, for even when carefully performed, there is a great probability that nearly all the air blown down the nostrils will enter the stomach, and not a particle reach the lungs. Still, though liable to failure, it is a means that should always be tried. The mode of proceeding is as follows:—The person should be laid on his back, the chest exposed and a little elevated, and the head slightly depressed; the pipe of a small pair of bellows is then to be inserted up one of the nostrils, and while an assistant compresses the nose, and covers the mouth with his hand, the other is to blow a few steady puffs of air down the passage with the bellows; the assistant is then to remove the hand from the mouth and nose, place both his hands, so as to cover the front of the chest, over the pit of the stomach, and gently press out the air received; then, with his palms and fingers spread over the lower ribs, draw them down. Again repeat the pressure, *and, as nearly as possible, imitate the natural motion of the parts during inspiration and expiration.* After repeating this two or three times, the mouth and nostrils are to be again closed, the lungs once more inflated with air, the same process resumed immediately after, and this persevered in for some time. When electricity or galvanism is to be procured, it should, in all cases of suspended animation, be immediately resorted to; and the body being isolated, slight shocks at first, and gradually increased, should be passed through the spine and chest. The feet, thighs, and armpits should be kept hot by heated bricks, or bottles of water, and a series of flat tiles, heated in the fire, should be placed under the patient's spine; at the same time, the chest, back, and throat are to be rubbed with a liniment composed of sweet oil, spirits of camphor, turpentine, and brandy. *In no case should any liquid be put into the mouth while the body remains in a state of insensibility*, or serious consequences might result from the fluid entering the lungs instead of the stomach. See DROWNING.

ARUM MACULATUM.—The cuckoo-plant, or starchwort, commonly called Wake-Robin, which see.

ARUNDA SACCHARIFERA.—The Sugar-cane. See SUGAR.

ARYTÆNOID CARTILAGE. — A small, thin cartilage, situated in the upper part of the throat, which, with its fellow of the same name, forms the top of the larynx, and constitutes the greater part of the organ of voice. The word is derived from the Greek, and signifies a drinking-vessel, from a fancied resemblance which the united cartilages make to a small ewer.

ARYTHMUS.—An old medical term to indicate a sinking of the pulse, or an *irregular fluttering, almost* imperceptible.

AS.—The Roman pound weight, composed of twelve ounces.

ASARABACCA.—The *Asarum asarabacca* is a small plant, native of this country, and belonging to the Natural order *Aristolochiaceæ;* and though, up to the beginning of the present century, greatly esteemed as a purgative and emetic, is now totally expunged from practice. A powder made from the dried leaves is still, however, employed as an ingredient in what is known as Cephalic Snuff.

ASBESTOS. — The name of a soft, fibrous stone, composed of flossy, silk-like filaments, which are easily separated, and of such length as to admit of their being woven into cloth. Asbestos was known to the ancients, and obtained its name from being *indestructible* by fire. It was found in large quantities in the mountains of Arcadia, in Greece, and seems to have been used both as a wick for perpetual lamps, and as a texture to resist fire. For this latter purpose asbestos has been of late much employed, as no amount of heat or time of burning, can injure the cloth made from this non-combustible material.

ASCARIDES.—Small worms, sometimes called *thread worms,* which generally infest the lower bowels, particularly the rectum, and are the source of much irritation and annoyance to children. See WORMS.

ASCITES.—A collection of water in the abdomen, more particularly at its lower part. Dropsy of the belly. See DROPSY.

ASH.—Though the ash tree is one of the most useful and, after oak, the most valuable of British grown timber, it is now never used medicinally, although known to possess diuretic and purgative properties.

The bark and leaves of the ash were formerly, when given in the form of a decoction, in great repute in all cases of venomous bites or stings, and in affections of the kidneys, and dropsies. See BITES, STINGS.

The leaves of the ash tree are extensively used in this country for adulterating tea (see TEA); and the hard or unexpanded buds, after being kept in brine, and mixed with ginger, are steeped in vinegar, and regarded as a great delicacy in the form of pickles.

ASHES.—The remains of any fuel burnt in a grate, whether mineral or vegetable. The ashes of the former consist generally of the different earths and other saline matters, especially sulphate of lime or gypsum; the ashes of vegetable material yield principally carbon.

Owing to the large proportion of lime contained in all cinders from coal fires, children troubled with worms, or acidity on the stomach, often find a relief to their worst symptoms in eating cinders, which they secretly purloin from the grate. See Worms. Ashes are also valuable as a manure, and, as a top dressing, add materially to the weight and quality of the crop.

From the wood or vegetable ashes, potash—or pearlash, as it is commonly called—is obtained. So large a quantity of potash is contained in the ashes of wood fires, that the farmer's or peasant's wife seldom buys soda for her washing, but making a strainer of her coarse apron, and spreading it over the mouth of a crock, puts a few shovelfuls of warm ashes on it, and pours, by slow degrees, a gallon or two of water on the cinders, which, dissolving the alkali, gives her a crock of strong lye, a jug of which in her tub of water produces all the benefit of a quantity of crystallized soda.

ASIATIC CHOLERA. See Cholera.

ASP, or ASPIC.—A small, venomous serpent, whose poison is so subtle and immediate in its effect, that it proves mortal in a few minutes. See Bites, Stings, and Serpents.

ASPARAGUS.—A well-known edible vegetable, belonging to the Natural order *Liliaceæ*. This esteemed delicacy, like the haulm of all the cabbage family, is only wholesome when tender and young; for, when old and stringy, it is both indigestible and acrid. See Food. In the vegetarian days of medicine, asparagus held a high place as a plant of rare virtue, both as a purgative and diuretic, and was largely used in cases of gravel, diseases of the bladder and kidneys, gout, sciatica, and the toothache. Its properties as a diuretic have caused it to retain a place in modern practice, and especially so in dropsies. Its efficacy, both on the bowels and the kidneys, appears to depend upon a peculiar alkaloid principle, called *Asparagin*. The root is the only part of the plant used medicinally, and that chiefly in the form of decoction.

ASPEN.—The bark of the aspen is occasionally used in medicine, on account of its powerful bitter property. As such, it is a good tonic, and, in combination with rhubarb, makes a useful stomachic.

ASPERSION.—A sprinkling or scattering of water—*generally of cold water*—over the head or the entire body. See Shower Bath.

ASPHALT.—A kind of bitumen or pitch, originally gathered on the shore of the Dead Sea, or Lake of Asphaltites. See Bitumen, and Barbadoes Tar.

ASPHYXIA. — This word literally means a stopping of the pulse, or a suspension of the vital powers, from whatever cause induced. Medical men, however, have now confined the meaning of the term to that form of suspended animation, the result of impure or venous blood (prevented from reaching the lungs to be purified by the oxygen from the air) entering the left side of the heart, and being carried into the circulation, when, if the natural course of the blood is not restored, the body becomes livid, and the person dies, poisoned by his own blood. Fortunately, this condition seldom occurs in any but new-born infants, from the valve which, before birth, unites the two sides of the heart, remaining open after the child has breathed, and allowing the blood to pass from the right side into the left cavity of that organ.

The *treatment* consists in putting the child into a hot bath, and rubbing the spine with oil, camphor, and brandy. See Suspended Animation; Advice to Mothers.

ASSAFŒTIDA.—A gum-resin of a strong, pungent, slightly aromatic, but extremely offensive odour.

Assafœtida is the concrete juice of the plant known botanically as the *Ferula assafœtida*, and belonging to the Natural order *Umbelliferæ*.

Uses and Properties.—Assafœtida, medicinally considered, is a stimulant, antispasmodic, carminative, and expectorant, and is highly valuable in all cases of hysteria, spasmodic affections, cramps, colic, diseases of the respiratory organs, particularly in asthma, in flatulence, and many nervous disorders. Though usually kept in the shops in bladders, composed of a mass of yellowish-brown tears, it is seldom used in the form of gum, being made into tincture—*tinctura fœtida;* or in the form of pills, combined with aloes, ginger, &c. —*pilulæ assafœtidæ compositæ;* or mixed with other ingredients, and with galbanum, as the *pilulæ galbani comp.* It is also combined with ether, making the *spiritus ætheris compositus;* and with sal volatile.

In any form it is a most valuable drug, and one always to be relied upon. The dose of gum assafœtida is from 3 to 5 grains, taken as a pill; from 5 to 15 drops of the tincture may be taken; and two of the compound pills at night, and one in the morning, is the general dose for an adult.

ASSES' MILK, from containing more sugar and less curd than the milk of cows, has been considered easier of digestion, and better suited for persons of weak stomach, and especially for the diet of infants brought up by hand, and for consumptive patients, and invalids generally.

Since chemistry has determined the relative proportion of nutritive matter contained in different milks, asses' milk, from being the nearest allied in all its qualities to that of woman's milk, has always been most esteemed as a substitute for that article as a food for infancy, the special difference between the two residing in this—that asses' milk contains more saccharine and less casein matter than the milk of woman; or, in other words, possesses more sugar and less cheese. For the constituents and properties of milk,—cows', ewes', mares', asses', and woman's,—see article MILK.

ASSIMILATION.—A medical term, signifying the making one thing like another, such as the conversion of food into chyle, the conversion of chyme into blood, and blood into bone and muscle. See DIGESTION, CHYLE.

ASTHMA.—A difficulty of breathing, proceeding from some affection of the lungs.

Asthma is a disease of the lungs, coming on in fits or paroxysms, and most frequently attacking persons of advanced age. Physicians have divided asthma into three varieties,—the humoral, or humid; the congestive; and the spasmodic asthma.

HUMORAL ASTHMA.—*Symptoms.*—This form of the disease is preceded by weariness, depression of spirits, drowsiness, pain in the head, tightness and great oppression of the lungs, which, as evening and night approaches, is accompanied with wheezing, and all the symptoms of oppressed and difficult respiration. The speech is interrupted, and the patient has much trouble in expressing his wishes or feelings, the countenance becoming anxious and careworn. About one or two in the morning all the symptoms become aggravated, and the paroxysm attains its height; the patient, under the dread of instant dissolution, often springs from his bed, and, rushing to the window, there gasps and sobs in great suffering, till the intensity of the symptoms slowly passes off. *According to the severity of the* attack, the face is either red and turgid, or deadly pale, with livid lips and eyelids.

After a continuance of two or three hours, about the break of day, the symptoms usually decline, the change commencing with a copious discharge of a thin, frothy expectoration from the lungs, easily coughed up, and affording marked relief with each fresh expectoration; the voice becomes freer, the patient speaks without trouble or anxiety, and the relieved sufferer, after a time, falls asleep. The tightness at the chest, and difficulty of breathing, continue for some few days after, though much less severe; and nightly, for two or three times, the patient experiences the premonitory symptoms of an attack, before the paroxysm can be said to have fairly passed away.

It is from the thin, watery fluid expectorated at the breaking up of the symptoms, that this variety of asthma has been called humoral.

Asthma is especially a chronic disease, and though any sudden exertion — ascending a steep flight of stairs, a disordered state of the system, an abrupt change of temperature, or dense fogs, may induce a return of the symptoms, it is, however, only when the constitution is impaired, and the paroxysms return in rapid succession, and the patient's strength is undermined, that asthma proves fatal.

Treatment. — The principal objects sought to be obtained are, first, to shorten the paroxysm; and then to prevent its return by removing, if possible, the exciting cause. When the patient is strong, of full body, and not advanced in years, it may be necessary to take 6 or 8 ounces of blood from the arm, or apply leeches to the chest; but such a course is only to be adopted when the red and turgid condition of the face indicates the plethoric state of the system.

In general, it will be found most efficacious to commence the treatment with an emetic, composed of 1 grain of tartar emetic, and 15 grains of ipecacuanha, dissolved in a cup of warm water, encouraging the vomiting by draughts of tepid water. When the vomiting has entirely ceased, the following mixture is to be taken in doses of two tablespoonfuls every three hours:—Take of—

Powdered nitre . . .	1 scruple.
Tartrate of antimony .	2 grains.
Mint water	6 ounces.
Tincture of lobelia, or Indian tobacco . .	2 drachms.

Mix. The following day the bowels are

to be acted on by a dose of Lenitive Electuary, or castor oil. When the patient is weak, and the disease of long standing, the antimonial or relaxing mode of treatment would be highly injurious; in such cases, a stimulating course must be adopted, and heat, or counter-irritation, applied to the chest and feet. In such a case, the immediate severity of the paroxysm is to be relieved by the subjoined mixture, bottles of hot water placed to the legs and feet, and a small quantity of the following embrocation rubbed over the chest and throat every four hours.

Mixture.—Take of—

Gum ammoniacum . .	½ drachm.
Carbonate of ammonia	1 scruple.

Mix thoroughly in—

Camphor water . . .	5½ ounces,

and add—

Tincture of assafœtida .	½ drachm.
Tincture of opium . .	1 drachm.
Spirits of sulphuric ether	1½ drachms.

Mix, and take two tablespoonfuls directly, and one spoonful every hour afterwards for three or four times, if the urgency of the symptoms require its repetition so often; when they do not, two tablespoonfuls are to be repeated every four or six hours.

Embrocation.—Take of—

Olive oil	1 ounce.
Oil of rosemary . . .	2 drachms.
Oil of thyme	1 drachm.
Oil of amber	6 drachms.
Spirits of hartshorn .	½ ounce.

Mix. To be well rubbed over the chest, as directed above. When there is much tightness at the chest, attended with difficulty of breathing, a blister should be applied in the centre of the breast, and kept on till it rises effectually. In some cases, however, a poultice made of equal parts of mustard and flour, and retained for half an hour, will be found quite as effectual.

Congestive Asthma.—This form of the disease is almost precisely similar to the former in its general symptoms, and in the fact of its coming on in paroxysms, with this difference, that the attack is more sudden, and the difficulty of breathing much more severe; it is at the same time distinguished by the absence of the thin, frothy expectoration, which always marks the humoral variety.

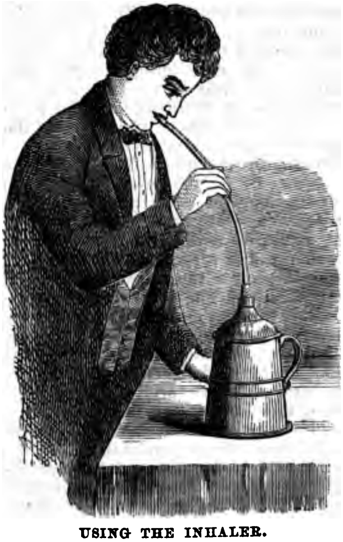
Treatment.—There are two important points to be attended to in this form of asthma. First, to maintain a steady counter-irritation over the chest; and, Secondly, to pay strict attention to the condition of the stomach and bowels.

Dry cupping—the application of the cupping-glasses without bleeding—is to be used in four or five places over the front of the chest, followed by a mustard and flour poultice, composed of equal parts of each, and allowed to remain on the chest for twenty minutes, repeating the poultice every four hours, for the same space of time, a piece of heated flannel being placed over the chest during the intervals. Small doses of the following mixture are to be given frequently, and the Compound Assafœtida pills taken at bedtime, and one in the morning, if necessary. Take of—

Bicarbonate of potass .	2 drachms.
Peppermint water . .	5½ ounces.
Tincture of squills . .	2 drachms.
Antimonial wine . .	½ ounce.

Mix. A tablespoonful to be given every two or three hours.

Great relief is often found in this form of the disease from the inhalation of steam or smoke. For this purpose, an Inhaler, such as the one represented in the accompanying cut, should be half filled with boiling water, mixed with about a dessert-spoonful of strong acetic acid, or half a drachm of sulphuric ether, or a few drops



USING THE INHALER.

of creosote, which being poured on the hot water, and the lid firmly secured, the patient is to adjust the mouthpiece to his lips, and slowly inhale the impregnated vapour that rises through the tube, retaining the steam as long as convenient in the mouth. Whichever article is used for the inhalation, the quantity employed should be steadily increased, and the operation always commenced with a small dose. Inhalation of the steam of plain warm water, sage or balm tea, or a decoction of camomiles and poppy-heads, poured into the inhaler, will often afford very great relief, and more particularly when used alternately with any of the above articles—acetic acid, ether, &c. See INHALATION. A good, and often very serviceable fumigation, in cases of asthma, is obtained by placing a few handfuls of bran and oatmeal in a washhand basin; pouring a quantity of boiling water upon the meal; stirring the whole hastily together; and while the patient leans his head over the steaming basin, a large towel, or piece of flannel, is to be thrown over all, and so tucked in below the basin as to confine all the vapour round the patient's head and face. The inhalation should be repeated two or three times a day, according to the severity of the symptoms; the patient, during the intervals, smoking an ordinary tobacco-pipeful of Stramonium, or thorn-apple, equal parts of tea and aniseed, or the leaves of the *Lobelia inflata*, or Indian tobacco.

SPASMODIC ASTHMA.—This form of the disease is by far the most distressing to witness, and the most harassing to the sufferer. The attack is always sudden, and comes on with extreme difficulty of breathing, and a sense of insupportable tightness across the chest; the face is deeply suffused, and expressive of intense anxiety; while a profuse sweat covers the forehead, face, and neck. The patient sits bent, and drooping forward, the shoulders elevated, the abdomen drawn in, the back arched, the arms resting on the knees, the head forward, the mouth open, and the muscles of the chest and respiration thrown into spasmodic action.

Treatment.—To relieve the urgency of the symptoms is the first duty of the medical man, for which doses of either of the following mixtures are to be given, according to the age of the patient, and the length of time he has suffered from the disease.

For an old standing asthma, occurring in advanced life, the mixture No. 1 will be found most serviceable; and for more recent cases, and persons of less advanced age, the mixture No. 2.

Mixture No. 1.—Take of—

Carbonate of ammonia	½ drachm.
Dover's powder	2 scruples.
Camphor water	6 ounces.
Spirits of sulphuric ether	1½ drachms.

Mix: three tablespoonfuls to be given immediately, and one tablespoonful in half an hour, if necessary. If the urgency of the symptoms, however, have been abated, one spoonful every two hours will be sufficient. At the same time with the mixture, tin bottles, filled with hot water, are to be applied to the feet and legs, and hot fomentations laid on the pit of the stomach, or a plain mustard plaster placed on the same part, and retained for ten minutes. A quantity of strong coffee should be made, and a cup of this beverage, without milk or sugar, given hot every quarter of an hour. The bowels must be acted upon by a dose of the compound assafœtida pills, and a mild action kept up by a pill every night, composed of equal parts of the compound rhubarb and compound assafœtida pills.

Mixture No. 2.—Take of—

Infusion of valerian, pennyroyal water, of each	3 ounces.
Tincture of myrrh	2 drachms.
Tincture of assafœtida	15 drops.
Tincture of opium	1 drachm.
Sulphuric ether	20 drops.

Mix: two tablespoonfuls to be taken directly, and repeated every three hours.

The same means are to be resorted to when this mixture is given as in the other, in respect to the hot water, coffee, and applications; and when the paroxysm is obstinate, tartar emetic ointment is to be rubbed on the chest till it produces heat and irritation. When the hot bath, or electricity, can be procured, either one or both should be employed.

The coming on of an attack is always known to a patient by certain sensations that may be relied on: at such times, the paroxysm may be warded off by a sudden dashing of cold water on the face; by a draught of camphor water, containing 20 drops of laudanum and 5 drops of ether; or by smoking a pipe of stramonium, among which a few grains of gum benzoin have been mixed. When the paroxysm has been subdued, the exciting cause must be discovered, and, if possible, removed; a light but nutritious dietary established; the bowels kept open by the means already suggested; and all excitement or strong bodily exertion strictly guarded against.

Chloroform has been employed by several medical men with marked success, and is unquestionably a powerful agent; but as it should never be used except under a medical man's superintendence, we have purposely avoided advancing it as a remedy, and have only advised what a non-professional man may use with safety.

All sudden and unequal currents of air are to be avoided; the patient should consequently be prevented from rushing to the window, and told to keep calm, hold his breath for a short time, and then slowly inflate his lungs.

Injections of warm gruel, with a spoonful of turpentine, and a drachm of tincture of assafœtida, will often afford more immediate relief than any of the other remedies prescribed.

ASTRAGALUS.—One of the seven bones forming the ankle joint, and commonly called the ankle or knuckle bone.

ASTRAGALUS VERUS.—The Tragacanth plant, yielding that well-known gum. See Tragacanth.

ASTRINGENTS.—A class of medicines which possess the power of making all living fibres contract, become condensed and corrugated, and are chiefly employed in medicine and surgery as an external application, either for restoring tonic power to a part, or to check various discharges. Astringents are employed internally, as well as externally, and are divided into the vegetable and mineral astringents.

Vegetable.

Oak and Elm bark.
Blackthorn and Barbary bark.
Tormentil root.
Bistort.
Alkalet.
Logwood.
Rose leaves.
Whortleberry.
Catechu, Kino.
Dragon's blood.
Sage.
Saunders' wood.
Pomegranate.
Gall-nuts.

Mineral.

Sulphuric, Nitric, and Muriatic Acid.
Iron, Zinc, Copper, Lead.
Antimony, Chalk, Lime, Alum.

Astringents are given internally, either to arrest discharge of blood—hemorrhage—or excessive evacuations, such as diarrhœa and dysentery, sometimes in the form of a mixture, or in drops, acid drinks, or in pills; and externally to check bleedings, dissipate tumours, *or subdue inflammations*, and in the form of gargles, lotions, ointments, and powders. The mode of exhibition, and the necessary quantity to be used, will be found either under the name of each article, the disease in which the drug is used, or under Lotion, Gargle, &c.

ATHEROMA.—In surgery, an encysted tumour, so named from the Greek, from its contents consisting of a thick, tough humour, like pap.

ATLAS.—The first bone of the vertebræ of the neck, so called by anatomists from its supporting the globe of the head.

ATMOSPHERE.—The air; the light, elastic fluid surrounding the habitable globe, and supposed to extend from the earth for an altitude of forty-five miles, having its greatest density on the surface of the earth, and gradually decreasing in density in a geometrical ratio with its altitude. See Air, and Respiration.

ATOM.—A term used by chemists to express the smallest subdivision, or particle, of divisible matter. An ultimate particle, incapable of further division.

ATONIC.—A want, or absence of power, generally applied to loss of muscular strength.

Atonic gout is a variety of that disease unattended by the usual inflammatory state of the joints, and characterized by flying pains, and great disturbance of the digestive organs. See Gout.

ATONY.—A general loss of muscular and nervous power; extreme physical debility. See Atrophy.

ATROPA BELLADONNA.—The Deadly Nightshade, or Fair Lady; a powerful narcotic vegetable poison, and a drug of remarkable efficacy. See Belladonna; Nightshade, Deadly.

ATROPHINE.—A new alkaloid, discovered in, and extracted from, the Deadly Nightshade, and possessing all the potency of the atropa plant, from which it is obtained.

ATROPHY.—This disease is the opposite of Hypertrophy, or excessive nutrition.

Nutrition is either excessive or defective. When the former, it shows itself by an increase in the size of a part, or of the whole body; as in the arm of the pugilist, the chest of the blacksmith, or in the frame of the corpulent man. When nutrition is *defective*, there is emaciation, either of a part, as in the limb of a person affected with paralysis, or in the wasted appearance of the body after fever, or from the long deprivation of sufficient food; the latter conditions constituting the diseased state known as atrophy.

The *causes* inducing atrophy are various; the chief, however, are scrofula, the absence of sufficient food, living too long on a rich diet, without a due proportion of coarse or less nutritious aliment; long privation, excessive discharges, indulgence in spirituous liquors, impure air, or noxious exhalations; and, in women, from continuing to suckle beyond a natural period.

Symptoms.—Extreme pallor of the skin, loss of appetite, debility, languor, cold perspirations, the flesh feels soft and flabby, the arms and legs become emaciated, and the belly large, and hard to the feel; the pulse becomes small and feeble, and a state of constant hectic fever exists; the body frequently being reduced to a state of mere skin and bone.

Treatment. — When the cause of atrophy can be traced to a scrofulous state of the system, the practice must begin with the warm bath, the daily use of friction over the whole body with the flesh-brush, or a rough towel; while a small quantity of the following ointment is to be rubbed over the belly every night, and the annexed powders and mixture given at the hours stated.

Ointment.—Take of—

Iodine	1 scruple.
Mercurial ointment .	1 ounce.
Lard	2 ounces.

Mix.

Powders.—Take of—

Grey powder	30 grains.
Powdered rhubarb . .	24 grains.
Powdered colombo . .	18 grains.
Antimonial powder .	12 grains.

Mix, and divide into twelve powders: one powder to be taken, in treacle, sugar and water, or jelly, every eight hours.

Mixture.—Take of—

Mucilage of gum arabic	1 ounce.
Castor oil	2 ounces.

Rub down till the oil is thoroughly incorporated; then add, by degrees,—

Peppermint water . .	7 ounces.
Spirits of sweet nitre .	2 drachms.
Syrup of ginger . . .	½ ounce.

Mix: three tablespoonfuls to be taken every morning, reducing the dose, after the bowels begin to act, to one spoonful every morning.

At the same time that these means are being adopted, the patient should take exercise in the open air, and regulate his diet to an equal mixture of animal and vegetable food, with a small quantity of *wine, stout, or Burton* ale, twice a day. When the disease proceeds from loss of tone, consequent on excessive discharges, or long suckling, the exciting causes must be first removed, and the system braced by tonics, a generous diet, and exercise; friction daily over the body, the occasional use of a tepid bath, and exercise, being equally necessary in the treatment, from whatever cause the atrophy may have been induced. As a tonic course, either of the following prescriptions may be employed:—

No. 1.—Take of—

Quassia raspings, and camomile flowers, of each	1 drachm.
Ginger root	2 drachms.
Boiling water . . .	1 pint.

Infuse for six hours; strain, and add—

Nitric acid	30 drops.

Mix: take two tablespoonfuls every four hours.

No. 2.—Take of—

Cascarilla bark, and canella alba, of each .	2 drachms.
Boiling water . . .	1 pint.

Infuse for six hours; strain, and add—

Carbonate of potass .	2 drachms.

Mix: take three tablespoonfuls three times a day.

No. 3.—Take of the—

Decoction of sarsaparilla	1 pint.

Add—

Tincture of muriate of iron	2 drachms.

Mix, and take two tablespoonfuls every three hours.

See MESENTERIC DISEASE, and DEBILITY.

LOCAL ATROPHY, or loss of power and substance in the leg or arm, frequently follows the long swathing of a limb in bandages, and the absence of all exercise. Cold affusions of water, and friction with the flesh-brush, with a judicious exercise of the member, is generally all that is necessary to restore the limb to its original size and strength. See PARALYSIS.

ATTENUANTS.—Such medicines as dilute or make thin the blood are so called. Any watery beverage possesses this property, especially vinegar and water, whey, or the juice of lemons or oranges mixed with water.

AUDITORY NERVES.—The seventh pair of cerebral nerves, which, rising from that portion of the brain called the *medulla oblongata*, are distributed to the ear, and called the auditory nerves.

AUDITORY PASSAGES.—These are two channels, one in the temporal bone, the other formed by the cartilage of the ear, both for the transmission of sound to the brain through the nerves of hearing, and called the external and internal auditory passage—*meatus auditorius externus, et internus.*

AURICLE.—*Auricula cordis*, one of the four cavities of the heart. There are two auricles, the right and the left, each one leading directly into an inferior cavity or ventricle. The right auricle, or ear of the heart, receives the ascending and descending *vena cava*, or all the venous blood of the system; and the left auricle receives the pulmonary artery, from the lungs, and its arterial blood, which it transmits to the left ventricle for the aorta to carry over the body. See Heart.

AURUM.—Gold; one of the precious metals. This mineral is never used in medicine, though its peroxide, or auric acid, and some of its salts, or aurates, are frequently employed in chemistry.

AUSCULTATION.—The science by which the diseases of the lungs, and other organs, are determined from the sound emitted by them, and conveyed to the ear of the physician by the stethoscope.

It is only by a close and long study of the natural sounds made by the lungs, in a state of perfect health, under the various conditions of repose, action, and excitement, that any reliable theory, on the unhealthy and diseased action of that organ, can be formed; and then long experience and great discrimination are required to give the physician confidence in the language of his instrument. Though the theory of auscultation, or the science of sound in relation to pathology, was first propounded by an Austrian physician a century ago, it was not till 1817, when Laennec, the celebrated French physician, invented the stethoscope, and gave, as it were, a tongue to the science, that auscultation became known to the medical profession. Even then it was some years later before the truth of the new discovery was generally adopted, and the value of the science, as a new light in the practice of physic, universally admitted. For an explanation of the various sounds detected during disease by the stethoscope, see Stethoscope, Percussion, Sound.

AUTOPSY.—A term now generally used to express a *post mortem* examination; from a compound Greek word, signifying an ocular inspection, or seeing a thing with a man's own eyes.

AVENA.—The *Latin name for the* plant known as the oat. See Oatmeal, and Food.

AXILLA.—The arm-pit; a triangular concavity, lying between the arm and the chest, and in anatomy and surgery regarded as one of the most important parts of the body, both on account of the number and importance of the great vessels confined within its narrow limits, and the difficulty of operating in a cavity where so many important organs lie crowded together. These consist of arteries, veins, nerves, lymphatics, glands, and cellular tissue, all receiving the name of *axillary* from their situation.

AXIS.—The name given by anatomists to the third cervical vertebra, or bone of the neck.

AXUNGIA.—Hog's-lard; a word used by physicians when ordering that article for extemporaneous ointments, for which, in pharmacy, it is extensively used. See Lard.

AZOTE.—Nitrogen; a simple substance, an elementary gas, and a constituent of the air we breathe, and so called from its being incapable of supporting animal life. Azote enters into combination with oxygen, hydrogen, and carbon; from its union with the former, in certain proportions, we obtain nitric acid, or *aqua-fortis;* and with the two last, prussic acid. See Nitrogen.

AZYGOS.—A word used in anatomy to express any part of the human structure without a fellow or corresponding organization—any single bone, muscle, or nerve. It is, however, chiefly confined to a solitary vein, the *vena azygos*, which, coming from the vertebræ, enters the *vena cava* near the heart.

B.

Among the Greeks B was used as a numeral to express 2, and employed by the Romans to signify 300; and with a dash over it, thus (B̄), stood for 3,000. In the chemical alphabet of the Arabians, B represented Mercury.

BABY LINEN.—The amount of clothing considered necessary for an expected infant varies according to the means of those who have to provide it; and what would be considered ample in one condition of life, would be held very insufficient by those of a higher sphere. We will take the medium class, and doubt not the following will be found all that is required.

Four night-gowns, made of fine calico, not too long, as they are very inconvenient in the night, when the mother has to move the child from one place to another. They are best made without any embroidery; a narrow cambric frill, *laid down* round the top, is all the trimming such articles require. *Two day-gowns* will be sufficient, as they are only wanted during the month, or till the baby is old enough to wear robes or frocks. These are best made of corded muslin, and the bodies ornamented with some fine white braid. *Six shirts*, for which fine lawn is the best material: the sleeves can be made plain or full; the latter certainly looks best, especially when trimmed round the arm-bands with narrow thread lace. *Six calico beds*, and *four blankets*—two for night and two for day use. *Six flannel* or linen *belly-bands*. It is best to continue the use of these for some little time after the navel-string has come off, as they are a great support to the back. Shoulder-straps should be avoided as much as possible for the first month, as it is always a difficult thing to get a baby's arms in and out of them while they are so young: a short roller, put loosely round under the arms, will be found to obviate the necessity for them, and keep all the things in their place. *Six nightcaps*, made of lawn, and *two squares of flannel* for head blankets; one finer than the other, and bound with silk galloon, for use during the day. *Three dozen squares* at the least will be required, of which two dozen may be diaper, and the others—as many as possible—are best made of an old linen sheet—they are softer and better for use than the new diaper; indeed, it does not much matter what they are made of, so that there are plenty of them. It cannot be too strongly impressed upon the young mother the necessity of always having a change for infants whenever required, as it keeps the infant in health, prevents its skin from chafing, and saves it from the fretfulness and irritability it naturally shows when neglected in this respect. Petticoats are not wanted till frocks or robes are worn, and then two will be always found sufficient: these are best made with a broad band in preference to a top, as they are easier to put on. *Four robes* will be found quite enough, with three fine diaper pinafores a yard in length: these are very useful, as they *save the front of the robe*, always look clean, and, with a piece of ribbon to tie them down round the waist, have a very neat appearance; and when the child is put into short clothes, they cut into six small pinafores, and thus answer two purposes. See ADVICE TO MOTHERS, DRESS.

BACCA.—The Latin for berry. A term used in pharmacy to represent certain fruits used in medicine, as the berries of juniper, &c.

BACCHIA.—A name given to that condition of red, discoloured face, accompanied with pimples, the consequence of hard drinking, or a continued use of spirituous liquors.

BACK, THE.—The hind part of the human structure, extending from the nape of the neck to the top of the false vertebræ—the *sacrum*—or where the spine joins the hips. This extent of surface—anatomically called the dorsal part of the subject—comprises three or four of the cervical or neck vertebræ, the twelve dorsal vertebræ, or backbones of the spinal column, the two bladebones (scapulæ), and the arching portion of all the ribs, with the muscles, ligaments, vessels, cords, and integuments lying along or above this line of bone. It is natural to suppose, that a part composed of more than thirty bones, and performing so many motions, and forming, in a measure, the supporting column of the human mansion, should be subject to several diseases, and exposed to many accidents; especially so, when it is remembered that the continuation of the brain—the seat of all sensation and motion—the spinal marrow, is enclosed in the tube or pipe formed for it by the vertebræ of the back. All those casualties and diseases, however, will be treated of elsewhere under their more appropriate heads, while only one—an every-day ailment—will be noticed under this. See HUMP-BACK, DISEASES OF THE SPINE, SPINAL CURVATURE, DEFORMITY, &c.

BACK, PAINS IN.—Persons are subject to pains in the back more frequently than in any other part of the body; and though such pains may be symptoms of spinal disease, psoas abscess, lumbago, diseases of the kidney, or inflammation of the liver, uterus, or other abdominal organs, it is merely to the ordinary pain of the back—the result of over-straining in work, or from cold—that we purpose referring to under this name.

Causes.—The lifting of sudden weights, walking for some time in a bent attitude with a weight on the shoulders, stooping, or raising the body suddenly upright; sitting against a draught of cold air, especially after walking quickly, or the putting on of a damp garment, are among the most general external causes of pains in the back. Whatever may have been the cause, the mode of

Treatment for all such superficial pains is extremely simple, and remarkably alike. In every case, immediate relief will be procured from a hot bath, which, with a good rubbing of the part afterwards with sweet oil or common lard, will generally effect a cure, that is, if the pain has been at once attended to. When the muscles have been severely strained, or, as is sometimes the case, their tendons have become twisted from a strain or heavy weight, if the hot bath cannot be obtained, a large, hot bran poultice should be put on the part affected for ten or fifteen minutes, to soften the skin, and promote absorption. The back is then to be well rubbed for some time with the following liniment:—

Take of—

Camphorated oil . . .	1 ounce.
Turpentine	2 drachms.
Spirits of hartshorn . .	3 drachms.

Mix: a heated flannel being afterwards bound round the back. The person should then lie down on a sofa, or go to bed, and have one or two heated tiles or a bottle of water placed beneath his back. This process may be repeated two or three times if necessary; though, in general, one good application, with a few hours' repose, after the use of the liniment, on hot tiles, will effect a cure. When the pain in the back is the result of cold, directly or indirectly applied, if the hot bath cannot be obtained, fomentations by hot water or a bran poultice should be had recourse to, a little sweet oil or hartshorn and oil, afterwards rubbed in, and the following draught taken immediately:—

Take of—

Camphor water . . .	1 ounce.
Spirits of sweet nitre .	1 drachm.
Sal volatile, spirits of .	25 drops.
Laudanum.	25 drops:

Mix. When the pain is attended with great difficulty of breathing, the draught should be taken at once, and the other means employed afterwards; and in extreme cases 5 drops of ether and 10 extra drops of laudanum are to be added to the draught. See LUMBAGO, SPINE, &c.

BACK-BOARD.—A board formerly in use in ladies' schools, for the *purpose of* *evidence* correcting a stooping habit in the pupil, and to make the young lady stand erect.

The back-board was a flat piece of deal, covered with leather, and supplied with straps and buckles, which, being fitted on the back, and the arms at the shoulders strapped to it, drew the body up, and, opening the chest, gave an erect and proper deportment to the figure while on; but being based on an absurdly erroneous principle, the plan utterly failed in effecting permanently what was sought to be obtained. The use of the back-board is now very properly expunged from all superior schools. See CALISTHENICS.

BADEN, BADEN-BADEN, AND BADEN. — Three Continental towns, celebrated for their medicinal waters. The first is situated in the canton of Argovia, in Switzerland, and held in high repute for its mineral waters and sulphureous hot springs, the latter having a temperature of 117°. The second, and the capital of the Grand Duchy of Swabia, has been renowned since the time of the Romans for its medical and saline waters, with a temperature from 117° to 154°. The third is a town of Austria, near Vienna, and long esteemed for its hot baths. These waters are sulphureous also, and vary in temperature from 92° to 97°. See MINERAL WATERS.

BAGNIO.—An Italian word, which originally implied a bathing-house erected over a spa. The term is now used in a very different sense in Italy; while in Constantinople it is the name given to the convicts' prison.

BAGNIGGE WELLS.—A saline mineral spring, of great efficacy, at Clerkenwell, in London; the waters of which so closely resemble Epsom salts in their properties, that two glasses full are regarded as equivalent to a full dose of that purgative salt.

BALDNESS.—The falling off of the hair from the crown of the head—sometimes from the whole scalp—and often occurring at a very early age of life. Though premature baldness frequently occurs from fever, or some disease affecting the glands of the cuticle which secrete the roots or bulbs of the hair, it often takes place in young men from no assignable cause. The best preventive means of saving the hair, when once it begins to show a tendency to fall off, is to have the whole scalp shaved immediately, and that operation repeated every month, till the strength of the next crop of bristles gives *evidence* of a more vigorous growth. At the same time, the following embrocation is to be well rubbed into the scalp every night upon going to bed, after having first irritated the cuticle with the hair-brush, to promote absorption.

Embrocation for the Growth of Hair.—Take of—

Castor oil	2 ounces.
Oil of rosemary . . .	2 drachms.
Essential oil of bitter almonds	15 drops.
Tincture of Spanish flies	3 drachms.

Mix. This will be found serviceable in every condition of baldness. Very little need be used at one time,—the most important object being to diffuse it well over the scalp. See Hair, Diseases of.

BALL AND SOCKET JOINT. See Articulation, and Joint.

BALM.—A common aromatic herb, the *Melissa officinalis;* a hardy, perennial plant, growing in most of our cottage gardens.

Infusions of balm leaves have been long a popular remedy in fevers; and, as a cool, grateful drink, can hardly be surpassed by any article as a beverage in fevers or inflammations; and, either with or without sugar, and slightly acidulated with elixir of vitriol, makes a most grateful drink in hot weather. See Drinks.

BALM, or BALSAM.—The sap or juice of trees or shrubs, odoriferous and aromatic: anything which heals or mitigates pain is so denominated.

Characters.—The balsam proper is an oily, aromatic, resinous substance, flowing spontaneously, or from incisions, from certain plants,—the term being confined to such vegetable juices as are liquid, or become concrete naturally, and consist of resinous substances, combined with benzoin acid, or are capable of offording that acid, by sublimation or atherwise.

All balsams are either solid or liquid. The liquid embrace the balm of Gilead, copaiba, Peru, and tolu; the solid, benzoin, dragon's blood, and storax.

Properties.—Balsams are warm, aromatic stimulants, acting as expectorants, demulcents, cordials; slightly antispasmodic, and, by their action on the mucous membrane, exert a local stimulating effect; in consequence of which some of their most beneficial results are produced. See Tolu, Peru.

BALM OF GILEAD.—This celebrated balm or balsam is the product of the *Odendron Gileadense*, a Syrian tree, of the genus *Amyris*, whose bark, wood, and fruit all yield a rich and highly aromatic resinous juice; that, however, obtained from the bark is the finest, and the genuine balm of Mecca or Gilead. The balsam is obtained either from incisions made in the bark, or it exudes naturally. So highly do the Turks regard this article, that it is hardly possible to obtain any genuine balsam in Europe.

The balm of Gilead, Mecca, or Syria,—for it is known by each name,—is of a yellowish green colour, of a pungent, aromatic taste, slightly bitter and acidulous, and possessing a most fragrant odour. Though given as a medicine in cases of uterine discharges, and as a tonic to females suffering from affections of that nature, it is as a perfume and cosmetic that the Turks chiefly regard it; and as an odoriferous unguent, they consider it as almost priceless. The so-called balm of Gilead brought to England is greatly adulterated.

BALNEUM.—A bath or bathing-house. See Bath.

BALSAM OF SULPHUR.—A solution of sulphur in oil. An article now exploded.

BANANA, or Plantain Tree.—The banana is one of the most valuable products of the West Indies, where it grows in great abundance in most of the islands, affording the inhabitants not only a medicine, but a food, and one as necessary to them as bread is to those in other countries.

The tree grows to the height of 20 feet, though frequently found much shorter; has a soft, slender stem, marked with purple stripes; the leaves are 6 feet in length, and the flowers bloom in clusters, covered with a fine, delicate purple sheath. The fruit of the banana is long and somewhat cylindrical, about five inches in length, by a circumference of three, with a soft, lusciously sweet pulp, but extremely wholesome and nutritious; and is either eaten raw, when ripe, or is cut into slices and fried. The fruit of the plantain, like its flowers, grows in clusters, or rather large branches, weighing from 10 to 15 pounds each bunch.

No tree of the West Indian Islands, or of Central America, is of such service and value to the people of those latitudes as the banana; for it is not only their staple and staff of life, but the food of their cattle also. In Mexico, the banana will support *fifty* men on ground where no wheat crop could grow sufficient food for *two.*

Horses, cattle, fowls, pigs, and dogs are supported on its fruit; the long, fleshy leaves are also of great service medically as a cool and excellent application to burns and inflammations, and, when applied as a dressing to a blister, not only allay the pain, but induce a rapid formation of new cuticle; while the watery juice drawn off from the soft pith of the banana trunk possesses strong astringent properties, and acts, when given internally, as a speedy cure for diarrhœa, dysentery, or any relaxation of the bowels.

THE BANANA, OR PLANTAIN TREE.

BANDAGES.—Any fillet, roller, or swathe of linen, cotton, or flannel, used for supporting a limb, retaining a dressing, or keeping in position the edges of a wound, is called a bandage. The use of a bandage is to compress bloodvessels, to correct deformities, unite wounds, keep fractured bones in their situation, and support ulcers or any other extensive breach in the continuity of the flesh. Bandages, of whatever material they may be made, should be strong, and of sufficient elasticity to support the parts to which they are applied, without becoming relaxed or loose, and sufficiently supple and soft to fold with ease and neatness, and yet yield without relaxation to the natural expansion of the limb. *A bandage* should, at the same time, be of sufficient length for the object for which it is used, but not longer than necessary; it should also be without seam or selvage, and have smooth, unravelled edges. Bandages are divided into simple and compound.

SIMPLE BANDAGES are long, narrow pieces of calico, linen, or flannel, of lengths varying from three to nine yards, and of a width from two to six inches. When such a strip is rolled up, it is called a bandage, or *single-headed roller;* when rolled equally from both ends, and meeting with a double roll in the centre, it is called a *double-headed roller.*

COMPOUND BANDAGES are such bandages as have one, two, or more pieces sewn together: the most serviceable and frequently-used bandage of this description is called the T bandage, and is composed of one horizontal limb, and a perpendicular one meeting it in the centre, where it is joined by a few stitches, forming a figure rudely resembling a T. Sometimes five or six short bandages are joined in the same manner, at equal distances, to a long horizontal piece, when it is called a many-tailed bandage; the same name is also applied to a broad bandage split, for a certain way up, into several strips.

The simple bandage has been divided into the circular, spiral, uniting, retaining, expellent, and creeping; and the compound bandage into the T, the four-tailed, the eighteen-tailed, the split-cloth, and the triangular bandage.

It is quite unnecessary to confuse the reader with a long list of bandages now quite out of use, or only employed by antiquated practitioners.

The only bandages necessary to be known are the single-headed roller, the double-headed roller, the single T and the double T bandage, with the handkerchief, which, with their peculiarities and modes of application, will be explained in the above order.

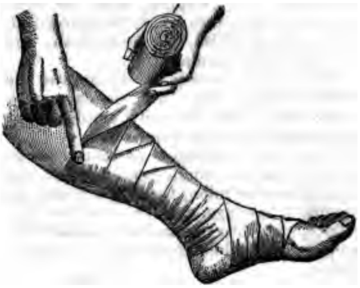
SINGLE-HEADED ROLLER.—This is a long strip of linen or cotton, of an indefinite length, and varying from three to six inches in breadth, which, being rolled up from one end firmly, evenly, and tightly, is denominated a roller, the rolled part being called the *head,* and the free end the *tail.* This bandage is the

SINGLE-HEADED ROLLER.

one most generally employed by surgeons, and used for sprains, wounds, ulcers, varicose veins, or for any purpose for which a bandage is required.

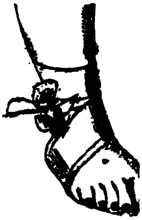
Mode of Application.—In applying a bandage, care must be taken that it is put on tight enough to fulfil the object for which it is applied, without running the risk of impeding the circulation; at the same time, if too slack to support the parts, it is perfectly useless; and again, if too tight, there is great danger of its causing the limb to swell, and thereby inducing inflammation and serious consequences. These rules and precautions hold good in every case where a bandage is necessary.

To apply the bandage properly, the head of the roller is to be held in the right hand, and only so much unrolled as is necessary for the commencement of the application. In all cases of applying a bandage to the leg or arm, the covering must begin either at the foot or the hand, so as to compress the whole limb alike. This fact must be borne in mind while putting on the roller, for if unevenly applied, the part, when unswathed, will appear in creases of swollen and contracted ridges. Taking the tail in the fingers of the left hand, and spreading it across the foot, and making a careful beginning by passing the roller a few times over the top and under the hollow of the foot, making each fold, or revolution, cover a third of the former circle, the bandage is to be carried round the heel, and so on to the leg. As the limb increases in size, the bandage must be made to fold back on itself by a double of the cloth, the fingers of the opposite hand being placed on the limb at the point where the turn is to be made, as shown in the above cut. In this *manner* the bandage is to be carried up the limb, the roller being passed from h to hand, as the situation of the p requires the change. The tightest par a bandage should be at the commen ment, with a gradual slackening a proceeds. Some surgeons hold bandage in the left hand, and manipu with the right; but this is immaterial the roller must occasionally be passed f one hand to the other.

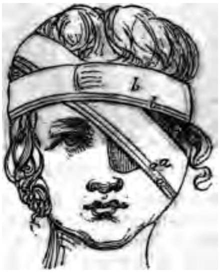


APPLYING ROLLER TO ANKLE AND LEG.

For the leg and foot, or for the h and wrist, the roller is to be applie the same manner. In applying it for either of these, the end, or tail, is to be placed on the external ankle or wrist, carried twice round the limb, to secure a firm hold; it is then to be brought across the top of the instep, or back of the hand, taken under the foot or palm, and led obliquely upwards and inwards for or three turns, till the wrist, or the a are covered, when a couple of turns s be taken round the leg or arm, and bandage secured.



The next most useful application of roller is shown in the following cut, w it is applied for injuries to the ey orbit, or for wounds to the upper pa the cheek or bone. The dressing ha been applied, and a compress placed all, the tail of the bandage (b) is to be sp on the temple of the side affected, ca across the forehead and round the tem above the ears, but between each and head, for two or three turns; a fo then to be made in the bandage be the ear of the unaffected side, and t pinned to the previous circles.



APPLICATION OF ROLLER TO THE

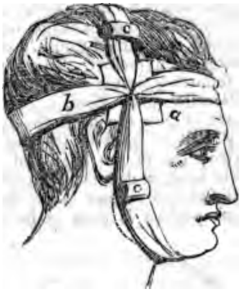
bandage (*a*) is then to be brought obliquely down over the forehead, past the angle of the nose, across the cheek and compress; round the back of the head, over two-thirds of the previous oblique fold, and in the same manner three courses of the bandage are to be taken over the eye or wound, when a second double of the roller is to be made, over the first, and, like that, pinned to the bandage below. The roller is now to be carried once or twice round the temples and head, the end of the roller doubled under, and neatly fastened on the forehead with three small pins.

Uses of the Single-headed Roller.—When from a sprain, or any weakness of a limb, it is necessary to give it temporary support, the single-headed roller is the most useful form of bandage; so is it also for cases of varicose veins, for indolent ulcers, and ulcers and wounds of all kinds requiring such support. After a fracture, and when the union of the bone has taken place, but while the limb still requires a support, this bandage is by far the most applicable; indeed, the most useful and generally employed, of every kind of bandage.

DOUBLE-HEADED ROLLER.—This bandage consists of a slip of calico of either five or ten yards long, equally rolled up from either end to the centre in two heads. The length of this bandage depends upon the purpose to which it is to be put, though its breadth in general should be between three and four inches; cases, however, may occur in which the double-headed roller should be even wider than four inches, and others, again, where two inches is wide enough.

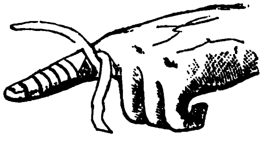
DOUBLE-HEADED ROLLER.

Mode of Application.—For clean-cut wounds of the thigh or leg, to support the muscles, and keep the parts in apposition or connection, both ends of the bandage are to be unrolled for about a quarter of a yard; this being passed below the limb, and a head held in either hand, the bandage is brought up on each side, the right-hand head carried to the left, and the left to the right side, and each, with a moderate amount of pressure, laid smoothly, and slightly overlapping, in an oblique direction, each other. In this manner, repeating *each double fold, and* beginning the bandaging a few inches below the wound, and terminating as much above it, the roller is brought to a conclusion, and tied in a bow. When the injury is in the head, on the temple, the wound having been dressed, the double-headed roller (*b*) is to be carried from the opposite temple, and brought round to the wound (*a*), on the top of which the meeting rollers are twisted, as shown in the cut, and one head (*c*) taken over the top of the head, the other (*c*) carried down the cheek and under the chin, till they meet on the top of the head, where they are again to be twisted, taken back, and the ends tied beneath the chin; or they may be brought back, and secured in a bow on the top of the head.



APPLICATION OF DOUBLE-HEADED ROLLER TO THE TEMPLE.

A double-headed bandage of extremely narrow dimensions is sometimes used for securing dressings on the fingers, as shown in the annexed cut, the terminal ends being used as strings to secure the whole

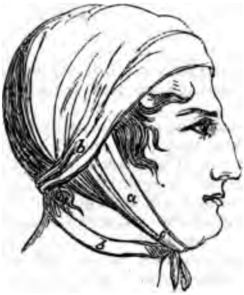


Great difficulty is sometimes experienced in securely fastening the end of a bandage, pins being often very objectionable: with the double-headed roller it is easy enough to make a bow; so equally is it with the single-headed bandage, if the final end of the roller is split with the scissors into two ribbons, a twist given to *both,* and one carried below and then tied with the other; by this means a safe and secure termination can always be effected.

Uses of the Double-headed Roller.—This bandage is especially adapted to cases of recent wounds, particularly incised or clean-cut wounds, and where it is necessary to close the lips, or cut-edges. It is also extremely useful for wounds of the head, as an amount of pressure can be established by the double-headed bandage not to be effected by the single-headed roller, or any other form of bandage.

HANDKERCHIEF BANDAGE.—An extremely useful kind of bandage, especially for the head, is obtained from the common silk pocket handkerchief. This is effected by the following simple contrivance:—

Application and Uses.—Throw the handkerchief over the head, the fore part hanging well in front of the face. The two extremities of the back end (*a*) are then to be brought down on each side of the neck, and tied in a knot below the chin; the front portion is then to be doubled under, and pulling the points firmly, and pressing the bandage securely across the forehead, carry its two ends (*b*) to the back of the head, where they are to be crossed with a twist, and finally brought under the chin, and tied in a secure bow.



HANDKERCHIEF BANDAGE.

This bandage is very serviceable when dressings are employed for a blister, or it is necessary to employ lotions to the head, when no evaporation is required, and to use as a covering when bladders of pounded ice or snow are applied to the scalp.

Surgeons have given a great number of names to bandages, but those to which we have referred, viz., the single and double-headed roller, the T bandage, and the handkerchief, are quite enough for all *ordinary purposes.*

The T bandage, whether single or double, is generally employed as a suspensory, being well suited for retaining dressings or poultices applied to the lower part of the abdomen, or in cases of rupture or abscess. The top, or horizontal portion of the bandage, is carried round the waist, and fastened in front by two or three pieces of tape, while the long limb hanging down behind is brought up between the legs, made to cover the dressing, and taken up the front of the abdomen, and secured to the horizontal part.

There are two or three small appliances almost as necessary as the bandage, and either made of the same materials, or of lint. These are the compress, or pledget; the tent; and the pelote.

The **COMPRESS** is a piece either of linen, cotton, or lint, doubled three or four times into a small, flat square, of whatever dimensions required. Sometimes it is necessary to have several compresses, each one diminishing in size from the one preceding, the object of this contrivance being to establish a more complete pressure when pressure is requisite; for the smallest compress is *first* placed over the part, and each succeeding one laid on the former is a degree larger, till the whole being secured by a bandage, the apex of the cone acts as a safe and most effective compress.

The **TENT** is a strip of lint, either rolled with the fingers to a point, or cut in a tapering shape, as shown by the accompanying cut. The purpose for which a tent is used is to enlarge a fistulous or narrow opening, so as to allow the secreted matter to escape; this object it effects by its expansion, when inserted into the puncture or wound, thereby dilating the opening, the pus escaping when the tent is withdrawn. A much better tent, however, is made with sponge and white ointment. See **TENT**.

THE TENT.

The **PELOTE** is a little mop, made of lint, the most flocculent part being selected for the head, which is to be defined by a piece of thread; the stem portion is then to be held between the finger and thumb, and the head used as a mop,

or dabber, to absorb any excess of matter lying on the granulating surface of a wound. See 'cut.

BANE.—A Saxon word, signifying a murderer, a killer of men, poison, destruction, or ruin. It is only as a poison, or something hurtful to life, that the word is now used, or as the contrary of antidote.

BANNOCK.—A cake made of oat or pea-meal, mixed with water and salt. See FOOD, BARLEY.

BARBADOES LEG.—The name of a very disgusting disease, to which the negroes of the West Indies are subject. This malady is characterized by an extraordinary distension of the cellular tissue of the leg, by which the limb becomes preternaturally enlarged, and often larger in girth than the man's body. See ELEPHANTIASIS ARABUM.

BARBADOES TAR. — *Petroleum Barbadense;* a species of naphtha, found naturally in great abundance in the island of Barbadoes. It is a thick, bituminous substance, of a dark brown colour, like treacle, with a strong, pungent odour, resembling tar. Barbadoes tar is only used in this country as a horse medicine, though frequently employed in the West Indies for bronchial or pulmonary complaints, for which, on account of its sweating or sudorific properties, it is held in some estimation.

BARBERRY TREE.—A prickly shrub, bearing berries of a sharp, acid flavour; sometimes employed in culinary purposes, as a substitute for cranberries in tarts and pies. The *Berberis vulgaris*, as the shrub is called, belongs to the Natural order *Berberidaceæ*. Medicinally, the fruit is cooling, and antiscorbutic. The bark of the tree or shrub, however, is the part most esteemed in medicine, being used as a tonic, and with considerable effect in cases of fever; and from its reputed power of opening the pores of the body, has been largely employed in chronic affections of the liver.

The usual form in which barberry bark is given is that of infusion, of which the dose is a tablespoonful every four hours. *Barbarine*, the active principle of the shrub, is used for the same diseases, and exerts the same effects, though administered in much smaller doses.

BAREGE WATERS. — Hot, sulphureous springs, so named from a small town in the valley of Barège, in the Hautes Pyrénées, on the confines of France and Spain. These highly esteemed *spas*, of which there are six, are greatly celebrated for their efficacy in all scrofulous diseases, tumours, cutaneous eruptions, rheumatisms, contractions of the muscles or tendons, chronic wounds, or indolent ulcers. The temperature of these waters varies from 73° to 120° Fah. The waters are either taken internally, or used as a bath, or both together. The spring of the lowest temperature is said to exercise special and distinctive properties from those of the others, and is recommended for its efficacy in all cases of torpid liver, weak digestion, and affections of the bladder and kidneys. See MINERAL WATERS. The inhabitants of this valley are noted for their taste in dress, and their skill in knitting. It is from this place that the beautiful material known as barège obtains its name.

BARK.—Though the rind of many trees and plants is used in medicine, all of them possessing more or less tonic properties, the word bark is now almost exclusively confined to that of the Cinchona tree, or the Peruvian bark, and its active principle, Quinine.

The Peruvian, or Jesuits' bark, is the product of a tree native to the south-western coast of South America, and though diffused widely over that part of the continent, is found in greatest perfection in Peru, from which circumstance, and having been first sent to Europe by the Jesuits, it has obtained the names by which it is generally known.

Peruvian bark, or Cinchona, belongs to the Natural order *Cinchonaceæ*, three varieties of which are used in medicine, the *pale, yellow*, and *red*, named respectively,—after the shape of the leaves of each variety,—*Chincona cordifolia, C. lancifolia*, and *C. oblongifolia*. It is from the pale variety, or *lancifolia*, or lance-shaped leaves, that the article so highly esteemed in medicine, the active principle and essence of the bark—quinina—is obtained in the greatest quantity and purity. Besides quinine, Puruvian bark yields another active principle possessing somewhat analogous properties—*cinchonin*.

The medical action of all barks is nearly similar, though some few have a special action of their own. Taken generally, however, they act as tonics, astringents, antiseptics, and stomachics, while the Peruvian bark is, in addition, a febrifuge of the highest order, especially so in all fevers characterized by periodicity of action; hence its great efficacy in *intermittent* and remittent fevers, gangrene, typhoid fevers, and all neuralgic affections. See Cinchona, Peruvian Bark and Quinine, Oak Bark, &c.

BARLEY.—A well-known grain, and, next to wheat, the most important of the European cereals. The *Hordeum distichon*, or the long-eared barley, is the variety chiefly cultivated in this country; and though all the varieties possess similar qualities, it is the long-eared which has been selected for pharmaceutical and medical purposes.

Uses and Properties. — Barley, though used as an article of food, is more particularly employed in this country for the manufacture of fermented and alcoholic liquors. To effect these results, however, the grain has to be subjected to certain processes, by which its nature is entirely altered, and by the chemical change of converting the starch of the grain into sugar we are enabled to obtain from the product, malt,—ale, porter, whiskey, gin, and spirits of wine.

As a food, barley ranks after wheat as a nutritious or nitrogenous aliment, and flesh-creating article of food, containing starch, sugar, gluten, and gum, and though not much used in southern Britain as an article of diet, except for invalids, is largely consumed in Scotland as an aliment. To render barley fit for culinary purposes, it must first be deprived of its skin, or husk, by means of a mill, when the grain assumes a rounded, whitish appearance, possessing a viscid, sweetish taste; in this condition it contains a very large proportion of starch, and is called pearl, French, or Scotch barley.

This form of the grain makes a highly nutritious food, and when boiled with milk, or milk and water,—like whole rice, —and used as a vegetable at dinner, or eaten with sugar, forms a plain and very excellent meal, particularly for children. See Food. The more frequent form in which barley is used in the North, is in combination with cut vegetables, kale, and meat, and boiled for several hours in water, forming that substantial and admirable food known as Scotch broth.

BARLEY-MEAL, or the coarse flour of the ground barley, is either made into a fermented or unfermented bread, or, what is more common, fashioned into cakes or bannocks. Barley-meal is sometimes mixed with oatmeal and mashed potatoes, which latter, while adding to the nutritive properties of the cake, are supposed to increase the lightness of the bread or scone, which, when mixed with potatoes, has also the property of keeping moist for a long time. Barley-meal is also used in the same manner as oatmeal, and made into a porridge, which, when eaten with milk, butter, treacle, or sugar, according to taste, forms a good supporting meal both for man and child, and, when properly boiled, is more nutritious than oatmeal porridge, and better suited as a diet for all persons engaged in sedentary pursuits, and, when mixed with a third of wheaten flour, makes a very substantial and economical household bread. Barley-meal is sometimes used for poultices, to encourage suppuration, but in this respect is not equal to linseed-meal.

For the spirituous products of barley, see Malt, Ale, and Alcohol.

BARLEY WATER.—This medicinal drink is made from the pearl, or Scotch barley, and may be either taken in its simple form, when cold, or flavoured with some of the substances given below. As there is some art required in making barley water properly, the following mode may be adopted with advantage. Take of—

Clean pearl barley . .	2 ounces.
Cold water	4½ pints.

Pour half a pint of the water on the barley in a saucepan, and simmer slowly for ten minutes; pour off all the liquor remaining, and add the four pints of water to the softened barley, and boil slowly till the quantity is reduced to one-half; strain into a large jug, in which one or two slices of a lemon have been placed, with a few lumps of sugar. When cold, and properly stirred, a cupful may be taken repeatedly. The juice of a few oranges, with an ounce or two of bruised sugar-candy, or a quarter of a pound of tamarinds, may be substituted for the lemon, and when sufficiently mixed by stirring, the whole is to be again strained, to keep back the seeds, twigs, and stones, and, according to the ailment for which it is used, a wineglassful of the drink given every one or four hours. In inflammatory diseases, or cases of bleeding from the lungs or stomach, a better form of barley water is made by adding to the two pints of boiled liquid, 1 ounce of simple syrup, and 1½ drachms of the red elixir of vitriol (see Drinks); while in cases of cough, or affections of the chest, a cool, relaxing draught, acting on the vessels of the throat and chest, is produced by adding 1 drachm of powdered nitre to each pint of barley water, and a tablespoonful taken every hour or two. Barley water, made as above, in which 2 ounces of gum arabic have been dissolved, and a drachm of nitre added, makes an admirable drink in all affections of the bladder, and in cases of strangury.

BARRENNESS. See Sterility.

BARYTA.—The metallic basis of the earth barytes—a native earth, extremely ponderous, of a dark grey colour, not easily fused, and has been so called from the Greek word *baros*, heavy, from its great weight. The only preparation of baryta, or the oxide of barium, used in medicine is the solution of the muriate of baryta, now known as the chloride of barium.

Medical uses.—This article is only used in scrofulous affections, glandular enlargements, and cutaneous diseases, in doses of from 3 to 10 drops, taken three times a day in distilled water. As this earth, and all its preparations, are extremely poisonous, great care must be taken, not only in preparing those used for chemical experiments, but in giving that form of it employed in medicine; for this purpose the dose must be steadily increased *one drop* a day, from the starting quantity of 3 drops, till the maximum dose of 10 drops is reached, when the use of the medicine is to be suspended for three or four days, and then resumed in the same cautious manner till the full dose is reached, or nausea produced, when it is again to be suspended. The best antidote for barytes, when taken in an overdose, or as a poison, is Epsom salts, or carbonate of soda, either side neutralizing the virulence of the poison; diluted sulphuric acid, mixed with distilled water, is afterwards to be taken in repeated draughts, the acid and water being sucked through a quill to save the teeth, and, after a short time, an emetic administered of white vitriol. See Poisons.

BASIL, SWEET.—A warm, aromatic herb, used for culinary purposes, and employed to give the peculiar flavour to mock-turtle soup. Though no longer used in medicine, basil was formerly considered a specific for the bites of all venomous animals, and, for the sting of bees and hornets, was regarded as affording immediate relief. In some parts of the country, the fresh leaves, bruised and applied to such injuries, are said to effect an instant cessation of pain. On account of its virtues, the plant has received the name of Basilicon.

BASILICON, or ROYAL OINTMENT, commonly called Yellow Basilicon.—When ointments were more in fashion in the practice of surgery than they now are, this ointment was in great repute for its supposed stimulating and healing qualities in all cases of ill-conditioned ulcers, old wounds, and abrasions. There were then three kinds of basilicon ointment in use—the *black*, made with pitch; the *green*, in which the flowers of the melilot, or king's clover, formed a large ingredient; and the *yellow*, the only one now remaining, and which, being made of lard, yellow wax, and rosin, is regarded as a good drawing salve, when such generally injurious applications as ointments are necessary.

BASILIC POWDER. — A nostrum, formerly greatly esteemed for affections of the head proceeding from an obstructed state of the bowels. The basilic powder was composed of rhubarb, jalap, and calomel, and made a very good and effective preparation.

BASILIC, ROYAL, or SOVEREIGN.—A name given by the ancients to certain parts of the body, and also to any preparation supposed to lead to a sovereign part, or exert a great or royal action on the system.

BASILIC VEIN.—A large vein of the arm proper, running along the *inner* side of the arm, and lying directly over the humeral artery. The *median basilic* is a short branch vein, running obliquely across the top of the fore-arm, in the bend of the elbow joint, and joining the great basilic in the same manner that the median cephalic joins the cephalic on the *outer* side of the arm. For the illustration of these four veins, see cut to the article Bleeding. The ancients called this the Liver-vein, and named it basilic from a belief that it came directly from that royal organ.

BATH WATERS. — The hot saline springs of Bath have been celebrated for their great medicinal efficacy since the time of the Roman supremacy in this country. The waters of Bath are the hottest springs in Britain, and vary in temperature from 92° to 116°. These waters are nearly all alike; have a clear, bright, and sparkling appearance when first drawn, but become flat and slightly discoloured by exposure to the air, throwing down a pale brown precipitate; they are nearly devoid of smell, but leave a strong mineral taste in the mouth when taken hot, which is imperceptible if the waters are drunk cold.

Diseases in which the Bath Waters are most serviceable.—To all those debilitated by a long residence in a hot climate, and the man of pleasure, broken down by a career of fashionable dissipation, these waters afford great benefit; to all persons afflicted with paralysis, or in cases of long-standing gout and rheumatism, and in jaundice, and all chronic affections of the liver. It has long been a question how much of the good that certainly does result from a season at Bath, and a course of its waters, was the result of the medicinal virtues of those spas, and how much was to be attributed to change of scene, gay society, and a life of rule and system, all acting reciprocally on mind and body.

The three principal springs are called the "King's," the "Hot," and the "Cross Bath." These waters are taken internally, and also used externally as a bath: sometimes only the one, sometimes both modes of employment are adopted together.

The Bath waters consist of—

Chloride of sodium,
Chloride of magnesium,
Sulphate of potass,
Sulphate of soda,
Sulphate of lime,
Carbonate of lime,
Phospho-carbonate of lime,
Alumina,
Silica,
Extraneous matter,
Carbonic acid gas,
Atmospheric air,

and a minute proportion of oxide of iron.

The bathing temperature of the "King's Bath" is from 100° to 106°, and that of the "Cross Bath" from 92° to 94°.

BATHING, or immersion of a part or the whole of the body in water, is one of the oldest sanitary institutions in the world; and as cleanliness of body in hot climates became an absolute necessity for the health and preservation of the people, the duty of frequent ablution in time became a religious ordination; and by thus blending the bodily with the spiritual purification, rulers fixed on the minds of the people the necessity of cleanliness, by grafting this moral duty on their religious observances.

The object of all bathing is twofold—1st, that of mere ablution, to remove from the cuticle of the body the dust and impurities which, from dried perspiration, have accumulated on its surface, blocking up the pores of the skin, and interfering with the proper exhalation from the body; and 2nd, that of a medical effect, either to reduce an excessive action in the skin, *when overcharged* with blood, or, by relieving the internal organs, res circulation to the surface: beside the object of bathing is often tc fillip to the constitution, and add a part or the whole body, by stin the nervous system, by the absor the material employed.

For this purpose baths have bee of medicated waters; of milk, (wine; of water impregnated wi or other soluble substances; of and common water, at differen peratures; and of steam or m vapours. For any of these subst act beneficially, or, indeed, to act *the cuticle* must have been *pr* *well cleansed,* the pores tho opened, and absorption excit friction. In prostrate and del constitutions, the body so treat immersed for some time in war or wine, may absorb and carry t the system a subtle stimulant, th by frequent repetition, act as a b tonic on the nerves and nutritive of the body; but in general, even the patient has the means to affo expensive agents, the benefit problematical.

The COLD BATH.—Bathing, means of cleanliness, is almost uni practised, though the manner in the bath is taken is very differe different nations.

In the East and in Russia bat a passive operation, the bather no exertion, but rather patiently operated upon. In France, an very large portion of the people, l is almost a farce, consisting of a t walk into the water for a short d a few up and down motions, and a less return to land. In this c however, salt or fresh water batl practised in a vigorous and health manner. The bather plunges hea most into the lake or sea, cutti water with his projected arms, once brings his entire body to th perature of the surrounding n when, if he is a swimmer, he strik calling into play every muscle of hi both to keep himself afloat, and at th time progress, performing an exer most invigorating and healthy a m practise, for it at one and the sam exercises all his limbs and muscles, e the chest, circulates the blood, and lates the brain with the pleasure of pastime. To insure a beneficial from bathing, the whole body an should be immersed at once, and the moment the breath has been recovered, the circulation is to be excited by swimming, so as to throw the blood back to the skin. After the swimming has been indulged in for 5 or 6 minutes, the bather should return to his machine, and, taking a rough towel or flesh-brush, rub the whole of his body, from the neck downwards, for several minutes, then indulge in another brief swim, and return to shore within a quarter of an hour from entering: from 12 to 15 *minutes* is the *maximum* that a cold salt water bath should last, to secure all the advantages of bathing—cleanliness, present enjoyment, and ulterior benefit. In fresh water, whether in lake or river, the bathing should *not* exceed 12 *minutes*. The swimmer in fresh water should never remain in any situation where he is conscious of a lower temperature in the water, as it is from remaining near or in the influence of cold springs that the cramps, which are often so fatal to bathers, are frequently owing.

As cramp proceeds from imperfect circulation in a part, or the sudden stagnation of the blood from the gush of a cold spring, the bather in fresh water should lose no time, after the first immersion, in establishing the general circulation by the use of friction with the towel or brush over the body, and particularly along the legs, thus affording him, as far as possible, a preventive against cramp in the lower extremities.

Those who cannot swim, whether bathing in salt or fresh water, should use as much muscular exertion while in the water as possible. The best evidence of the benefit derived from bathing is a ruddy glow felt over the body on coming out, with a pleasurable sense of warmth, and a general elevation of spirits. If, however, the bather feels cold and depressed on quitting the water, trembles, complains of headache, and has a blue and anxious countenance, it is a convincing proof that his system is not strong enough to bear the effect of cold bathing; in which case, the idea of persevering with it must be abandoned, and the tepid bath substituted for the cold. The cold swimming bath should never be taken by apoplectic subjects, or by persons liable to hemorrhage, or by those labouring under pulmonary disease.

Bathing must never be practised directly *after a meal*, or *on a full stomach;* it is equally improper to bathe upon an entirely empty one, especially in the daytime.

The best periods of the day for bathing are an hour after breakfast, and about eleven, twelve, or one o'clock in the day; the first period should be adopted by the robust, young, and healthy, and the other hours selected by the infirm, and those more advanced in years. One bath a day, at whatever time taken, is sufficient; and no benefit can result from repeating it oftener. All bathers should avoid entering the water in a state of exhaustion, fatigue, or excessive heat, either from exercise or the weather.

Some bathers are in the habit of merely wiping off the excess of moisture from the body before dressing. This is a bad practice: the skin should be well dried, and considerable friction again applied to the surface; by this, and the former rubbing in the water, the cuticle will be as effectually cleansed as can be done by any ablution short of the sweating bath, while it will be excited to a healthier action by the stimulus of friction.

During the bathing season in England, the temperature of the water varies from 50° to 70°; the mean may be taken at 63°; at the same time, the temperature of the human system — internal—is 98°, and the mean of the surface 90°: the consequence of a body at 90° plunging into a medium at 63° is an instant receding of the blood from the surface, an acute sensation of cold, a paleness of the skin, a hurried, gasping respiration, and an oppressed action of the heart. In a healthy bather these symptoms soon pass off, and are succeeded by an agreeable glow; but in all cases it is advisable, as we have already shown, to produce this reaction as quickly and as effectually as possible, by the exertion of brisk swimming, or muscular motion of some kind: this is particularly necessary in those who bathe for the purpose of giving tone to the system, strength to the stomach and digestive organs, and hope so to brace the body as to resist all atmospheric influences. The best bathing months are from June to September.

In quitting the subject of cold salt water bathing, we would impress on the mind of the reader the importance of never remaining in a state of *inaction* while bathing; never to remain in the water *long enough to feel* chilled, and *to leave* the water immediately on feeling any *indication of cramp;* and finally, to avoid any violent exertion for some time after leaving the water.

MEDICAL BATHS.

Under this head is included every species of variety of bathing taken for medical or beneficial purposes. This list includes the cold, tepid, the warm, the hot, shower, and the vapour bath, with the local forms of the hip, foot, and slipper, and medicated bath.

COLD BATH.—The cold bath may be employed within doors all the year round, care being taken never to use water fresh drawn from the pump or well, but either to allow it to remain in the bath for some hours, to raise the temperature, or, by the addition of a pint or two of boiling water, to increase the warmth, till the thermometer, indicates 55°, between which and 60° is the usual temperature at which a cold bath should be taken. The time of remaining in such a bath is from five to seven minutes, but should never exceed ten minutes,—the hand, if not the flesh-brush, being used to produce friction over the body while in the water. This is a form of bath that should ***never be given to infants*** or very young children.

Medical uses.—The cold bath is useful in all cases of nervous debility, indigestion, diseases of the skin, nervous headaches, and in conditions of the system where tone is particularly required.

TEPID BATH.—This is a very serviceable condition of bath, and as the heat is nearly that of the body, the comfort afforded by it is consequently very great. The temperature of the tepid bath varies from 85° to 92°; the exact heat depends on circumstances, and particularly on the disease for which it is ordered. As a means of cleanliness, the tepid is infinitely better than the cold bath. The time of remaining in the water varies from eight to twelve minutes, unless used for skin diseases, when the time may exceed the space given by another ten minutes, friction being employed during the time.

Medical uses.—As a remedial agent in all irritations of the system requiring soothing, in cases of fever, all eruptive diseases of the skin, rheumatism, coughs, colds, and inflammations of the throat, this is always an extremely useful bath, and particularly so for children.

WARM BATH.—The warm bath is the most serviceable, and, in a general sense, ***the most valuable*** bath the medical man possesses; for it not only
tranquillizes the system, op
of the skin, and equalizes t
but it acts as a direct sti
blood.

The temperature of the
holds a middle place betwee
the hot bath, and should r
92° and 98°. As the w
very exhausting, and is
when a sudden and posi
desired, the patient should
in the water for *a minute* a
sought has been obtained;
will generally be found lon
all beneficial purposes, or
as the extreme warranted ti

Medical uses.—In all ca
spasm, nervous affections,
flammations of the liver,
bowels, affections of the ki
rupture, and diseases of the
membrane of the chest, and
voice, the pharynx, &c., an
the diseases and *affections o*
childhood, this bath is emi
able,—in teething, measle
vulsions, or the many cause
the use of a bath among chi

As a general rule, the *u*
infants and *very young c*
not exceed NINETY-SIX D
as the skin of infancy is
no child should be kept m
minutes in the warm bath.

Children should NEVER
being taken out of a bath
or cold: this important fact
be borne in mind by mothe
A blanket should be held
and the body of the child o
fully enfolded in it, all ex
and in this position the pa
placed in the bed or cradle
sleep, that always follows
the bath, has passed off, wh
taken up and dressed. By
rule, the child will escap
catching cold from a bath,—
are prone to if kept on the
while being dried and clot
perspiration, induced by
opening the pores of the
encouraged and made bene
whenever practicable, shou
same rule, as the good effec
bath is often entirely count
chill caught in the process o
wards.

HOT BATH.—This is only
form of the warm bath, th

eing carried some 12° or 14° higher. he variations in the hot bath extend om 100° to 112°, but the average heat ay be taken at 106°. As this bath acts ore rapidly than the warm bath, is nfinitely more stimulating, and, as a nsequence, more exhausting, the patient hould not remain in it for more than *five* minutes.

Medical uses.—From the strong and immediate action this bath exerts on the skin, it becomes one of the most powerful antispasmodic agents we possess; and in cases of congestion, by relieving the internal organs of their load of blood, and sending it through all the capillaries to the skin, produces immediate relief. The hot bath is consequently invaluable in all thoracic and abdominal diseases, especially in their aggravated stages: and as the warm bath was beneficial in their milder forms, this is remedial in their graver ones. In neuralgia, rheumatism, stiff joints, tetanus, locked jaw, or in any disease requiring prompt and energetic practice, the hot bath is a medical agent of extraordinary efficacy.

VAPOUR BATH.—The steam, or hot air bath, is frequently used where the other forms would be too exhausting to the patient, or less efficacious. Temperature, from 100° to 125°. For the proper and full account of the vapour bath see Turkish Bath. In Russia, the patient enters a stone-paved chamber, heated to a high temperature, the flags beneath being so hot, that pails of water dashed on them cause a cloud of steam to rise, that, surrounding the naked body, soon causes a copious perspiration to break out. A tolerably effective vapour bath may be extemporised by filling a small tub or pail half full of boiling water, the patient standing with a leg on either side, while his person, from the neck to the floor, is closely enfolded in a thick blanket, which, shutting in the steam, allows it to flow round his body. Three or four bricks, made red hot in the grate of the room, are to be dropped, one at a time, into the pail, to generate fresh steam, till finally the effect has been obtained. The vapour bath may last from ten to twelve minutes.

Medical uses.—Chronic rheumatism, sciatica, lumbago, ill-conditioned sores, ulcers, and obstinate diseases of the skin, are the principal complaints in which this kind of bath is most serviceable. See FUMIGATION.

MEDICATED BATHS.—This variety of baths consists of either hot water, impregnated with iron, potass, ammonia, or other mineral or earthy matters; or they are composed of gaseous vapour, applied to the skin in the mode already explained under Vapour Bath. Chalybeate and saline baths, in imitation of some of the most celebrated home and continental spas, are made by dissolving the salts known to exist in those waters, and letting the patient use them hot, the temperature varying from 84° to 90°. A *Sulphur Bath* is produced by the sulphuric acid gas, which is allowed to circle round the patient's body, being confined there, and kept from the head and face by a blanket. The *Nitro-Muriatic Acid Bath* is effected either in the same manner, or by mixing the acids with water, and sponging the body with the solution; and the *Ammoniacal Bath* is prepared by dissolving a pound of carbonate of ammonia in a bathful of warm water. All these kinds of baths require *great care* and *much caution* in their use, and can only be effectually employed in public hospitals, where proper apparatus are kept for the purpose, or under the eye of a surgeon.

Medical uses.—Inveterate skin diseases are the chief affections for which medicated baths, whether liquid or vapour, are used.

SHOWER BATH.—The shower bath is a very useful form of applying water, either warm, tepid, or cold, to the body; and, in the latter condition, is a highly invigorating process. But as the benefit derived is consequent on the sudden and quick fall of water, only one quantity should be taken at a time, a second shock producing more harm than benefit. The shower bath should be taken early in the morning; other parts of the day, though *not hurtful*, are by no means so beneficial. Those persons afraid of the effect produced on the head by the sudden fall of water, should wear a conical oil-skin cap, and stand with the feet immersed in warm water.

Medical uses.—Neuralgic affections of the head, with periodical headaches, are the cases that derive the most benefit from the shower bath; and though it has been tried with some benefit in cases of insanity, it is as a general tonic to the system that the shower bath is most efficacious. In apoplectic patients its use is *decidedly objectionable.*

BATHS.—Many varieties of baths have of late years been invented for the convenience of the public; most of them so portable, that they now form a part of the travelling equipage. Baths are made of all shapes and sizes, and almost for every part of the body; fashioned out of earthenware, tin, and waterproof cloth, or vulcanized Indian rubber. The oldest and most generally used bath is the apparatus known as

The **Slipper Bath**; this familiar vessel, in shape somewhat resembling a demi-boot, is only used when the whole body has to be immersed, and though convenient for the purpose required in a bedroom, and where no proper open bath is attainable, is awkward where friction is necessary, and the patient is unable to operate on himself; it is also extremely inconvenient to be tered or got out of; still, the benefit yielded by the bath is generally so great, and its importance so necessary, that all minor objections must give place to the anticipated good.

The **Hip Bath**.—This bath, in shape like a large basin with an inclining back, is an extremely useful vehicle, and is generally made deep enough to hold sufficient water to cover the hips and lower part of the abdomen; is well adapted for cases of *sciatica*, rheumatic affections of the hips, lumbago, or pains in the back; and for females, in most uterine and vaginal affections, diseases of the bladder, &c.

The **Leg Bath** is an upright vessel reaching to the knees, with a broad projecting bottom for the feet, and is extremely convenient, not only for cases of ordinary colds, but for all muscular pains in the legs or feet, and chronic rheumatism, or to relieve the head in cases of apoplexy, hysteria, &c.

The **Foot Bath** is made of many shapes, and being an article of such frequent employment, should always find a place in the bedroom. The occasions on which it may be employed are too numerous to require mention; it is only necessary to say of it that, whenever ordered medically, the water should be *as hot as can be borne, and the feet only plunged into it three or four times*, never allowed to soak, unless used for cleanliness, and, on being taken out, should be wrapped, steaming and wet, in flannel, and the patient instantly retire to bed.

The **Sponge Bath** is merely a shallow disc of tin, large enough to allow the person to sit erect, and from the few quarts of cold vinegar and water it contains sponge his body freely.

The **Shower Bath** has been lately made so portable and compact, that any *person*, for a few shillings, can obtain one of these invigorating appliances. Fo children, a watering-pot, with the ros firmly fitted on, makes as good a showe bath as can be desired; the nurse stand ing on the table, and the child in th middle of a large tub.

The **Portable Bath** is something i shape like a hammock stretched on fou poles, and composed of waterproof clot It may be made of any size, but is princi pally adapted for children. It can b rolled up on its poles, like a small scen or map.

The **Aspersion**, or **Douche Bath**.— The value of cold water dashed sudden over the frame, or directed in a stead broad stream on some particular part, i very great. The cases in which such mode of treatment is beneficial, are ver numerous; the following are a few of th most important:—Where the muscul power of a leg or arm is impaired fro long inaction; in cases of fracture, dis cation, bandaging, sprains, and from pa tial paralysis, or chronic rheumatism, stream of cold water directed on the pa from a watering-can, without the rose— if the patient sits on the ground, and th operator stands on a table, and, elevatin the can, gives the water a fall of seve feet—is very great, and rendered partic larly serviceable if the circulation i quickly restored to the part by seve minutes of dry rubbing. Such a mode practice, if repeated for some days, wi vigorous friction afterwards, will resto action to the most indolent muscl The other cases in which cold aspe sions are singularly efficacious, a poisonings from opium, laurel wat prussic acid, in tetanus, trismus locked jaw, hysteria, and suffocation fro noxious gases. The douche is a mode Hydropathic phrase, and means in its ge ral principle the same thing as aspersio only carried a little further than is alwa agreeable to patients in this country.

The Continental Douche is either an *cending* or a *descending* jet of water. I the former, by means of a pipe and tu attached to a reservoir, a stream of co water is injected up the vagina or th rectum, for the cure of uterine and oth discharges, and to overcome an obstin constipation. In the latter, a downw column of water is directed on the h shoulders, loins, or wherever needed, f the affections above enumerated.

There is only one other form of ba to which we need refer in this place—

The **Wet Sheet**.—This is quite a m

dern innovation in English practice, and forms an important agent in the Hydropathic system of treatment. Almost every kind of disease has been recommended as suited to, and deriving benefit from, this species of bath; rheumatism and cutaneous diseases in particular.

A large sheet is immersed in cold water, and instantly wrapped round the patient's person; a succession of blankets are heaped over the sheet, the patient placed in bed, and, with only his face uncovered, a mass of bed-clothes thrown over him, where he lies incapable of motion till the copious sweat that follows has entirely passed off. See Hydropathy.

BEAN.—A well-known vegetable, the *Vicia faba*, and largely cultivated, both in field and garden, as a food for horses, and a highly nutritious aliment for man. All the varieties are wholesome and nutritive, though the kidney, or French bean, the *Phaseolus vulgaris*, — and the scarlet runner, a coarser but more prolific variety of the same,—and the broad bean, are the kinds in most general use as an aliment. When young, all the varieties of the bean are equally good and wholesome. In weak stomachs, beans are apt to produce flatulence, but when eaten in moderation, and with a due proportion of animal food, they prove highly beneficial, in consequence of the amount of starch and gluten they contain. See Food and Pulse.

BEAR'S FOOT, or Setter's Wort.—A fœtid variety of the hellebore, and, like all the members of that family, an acrid vegetable poison. See Hellebore, Stinking.

BEAR'S GREASE. — It was long supposed that the fat of the polar bear was singularly efficacious in promoting the growth of the human hair; the fallacy, however, is now exploded. No animal oil is better for that purpose than the vegetable oils; indeed, not so good, as the *Palma Christi*, or castor oil, is superior to all others. See Hair, Growth of, &c.; Baldness.

BEBURINA.—The active principle of the *Green-heart Tree*. Medicinally, a strong tonic and febrifuge, and efficacious in intermittent fevers and general debility. It is, however, necessary to precede its use by a dose of aperient medicine. Dose, from 1 to 2 grains every six hours. See Green-heart Tree.

BED.—It would be a waste of words, and one of time, to expatiate on the physical advantages and social luxury *of the* bed; the most necessary piece of our household furniture, and, too often, the greatest reproach of our moral lives, as in that piece of domestic mechanism most of us spend a *a third*, and some a still *larger portion of their mortal career*. Few people, perhaps, give sufficient heed to this fact, or reflect that out of the allotted term of man's life,—the three score and ten years of Scripture,—TWENTY-THREE YEARS, at least, are passed in oblivion, in a state of unconscious sleep, stretched lethargically in that article to which we refer, not only wasting the oil of life in unprofitable repose, but, by excess of inaction, weakening the frame, and impairing it for the responsible duties it is left to perform. That the bed is the necessary vehicle for the great natural medicine of life,—sleep,—

> "Sleep, that knits up the ravell'd sleeve of care;
> The death of each day's life; sore labour's bath;
> Balm of hurt minds; great nature's second course,
> Chief nourisher in life's feast,"—

no one will deny, and, in some form or other, is more requisite to man's health and comfort than all the other appliances with which he surrounds his domestic life. It is against the *abuse* of the bed that the few remarks we have to make are advanced, —against the *manner* in which it is made to minister to luxurious ease, and encourage indolent and enervating habits, and the wanton sacrifice of time to which the bed ministers from being made so sensually soft and tempting. Were our beds more simply fashioned, and made of articles more conducive to health, the hours now wasted in idleness or sleep would be most materially abridged, and beneficially improved. The modern bed of luxury is so near in all its features to the couch of Morpheus, as fabled by the Roman poet, that with its downy feathers, deep and sweeping curtains, it seems less the instrument to bodily rest and repose than the courted residence of profound oblivion. As a general rule, feather beds are more hurtful than beneficial, by absorbing all the animal impurities given off by the body in sleep, and afterwards returning them to the sleeper; and when it is remembered how many years a feather bed is used before its feathers are cleaned and purified, it seems a marvel that more injurious effects are not the consequence. The bed should stand with the head to the *wall, in the* centre of the room, raised two feet from the floor; the bottom should be made of laths instead of ticking, as admitting a freer circulation; a couple of mattresses, the top one made of horsehair and cotton, or wool, or instead, what is better, the French spring mattress, will be found more conducive to health and rest than a feather or down bed. The curtains should never be close drawn round the entire bed, and the top of the bed should be open. Children, as a rule, should never sleep on feather beds, or be closely surrounded by curtains.

For the invalid, numerous contrivances have been invented, in the shape of beds in which both air and water have been employed as a sustaining medium; of the latter, one of the most useful is made by filling a series of cylinders ot vulcanized India rubber (like bolsters) with water, and confining them together by cords, which, with a sheet and blanket over all, makes a light, elastic bed, which has the advantage of accommodating itself to every motion of the patient's body. See HYDROSTATIC BEDS, SLEEP.

BED SORES.—To the invalid, wearied by a long-continued fever, the irritation of spirit consequent on lying long confined in one locality, and the heat and vexation of a sleepless pillow, or to the patient suffering from the tedious injury of a simple or compound fracture, the bed in which he turns his fever-shaken limbs, or holds silent commune with his mangled flesh and crushed bones, becomes a question of paramount importance. Blessed with health and strength, man or woman can sleep anywhere, and, with a sufficient pad beneath them, as soundly on the boards as on the best spring couch that French luxury ever devised. But to the invalid it is very different: the mind is made irritable by disease; the skin becomes preternaturally sensitive, and being robbed by the rapid absorption of the thick adipose tissue, lying between it and the muscles, which formerly acted as a pillow, or soft cushion, to take off the pressure from any part, becomes also excessively irritable, and sensitive to the slightest inequality in the sheet, or the smallest roughness in the mattress or bed beneath, and, in a short time, gives evidence of the fact in the abraded condition of the cuticle. On this account, these injuries to the skin and adjacent parts have been called "bed sores," and as they often assume a very serious appearance, are attended with great pain and inconvenience, and *not unfrequently* terminate in gangrene or sloughing, their cure is a mat importance; for as the skin, from tl of the cellular tissue, and the pressure of the bones beneath, ha much of its vital energy and pow resistance, it soon begins to sho traces of its low vitality by discolor pain, and tenderness. From this st the mischief to the breaking of the and the formation of an open ru sore, the process is often extremely and it frequently happens that not t whole hip, or a large wound on the is formed, is the medical man appri the injury, or called in to cure the mis

TREATMENT.—In the first stage c sores, when the cuticle is only inflam of a dark colour, an application of coll or of the extract of lead, is generally sufficient to suspend the diseased a Whichever article, however, is used place should be carefully wetted for t three times with the drug, and the of lint used for the purpose after spread smoothly over the part. The treatment is to be adopted when the is broken. Some persons bathe the or parts with brandy and water, or warm water, and some, again, tincture of arnica; but these remedi by no means so effectual as the suggested above, of the collodion extract of lead.

In cases where sloughing has place, the wound should be washed little spirits and water, sufficiently to produce a slight degree of sma The part is then to be wiped gentl covered with violet or starch po fresh powder being added every tw three hours, till it forms a cake ove sore. No kind of bed can be of benefit to one suffering from bed when they are once formed; the ch should *take place before the* *effected;* but when once establi instead of removing the patient different bed, a contrivance must be to take off the pressure from the existing. For this purpose, a pie thick buckskin, with a hole, large en to admit the sore, cut out of the cent like a corn-plaster,—and its surface s with soap-plaster, is to be put ove around the part, whether a mere coloration, abrasion, or open sore one thickness of skin is not deep en to keep off the pressure from the p circular pad, like a broad ring, of t three inches thick, must be made placed in such a manner under patient's body, but encircling the plaster and dressing, as will insure perfect freedom from contact of the sore with the bed. Without a pad, or open plaster, to protect the sore, *no application can possibly benefit the patient, or give the sores a chance of healing;* and no application of ointment, plaster, or lotion to a bed sore, unless the pressure of the body and of the bed is taken off, can possibly effect any good; indeed, without such a mechanical contrivance they must all severally effect actual harm.

The soap-plaster of the Pharmacopœia was, a century ago, devised for this purpose, and whole sheepskins were spread with it to lay over the patient's hips, loins, and back, but always with a result of more harm that good. The plaster melted, the relaxed skin crumpled; and the cuticle fretted, by the plaster made doubly sensitive, gave way at once under the first crease in the relaxed leather of the plaster, and a sore was established by the very remedy meant to prevent it.

BEEF.—One of the most nutritious articles in the class of animal food, and, though less easily digestible than mutton, is, in cases of great debility, and where, from impoverished blood, the vital powers are very low, preferable to every other kind of flesh-creating aliment. As mutton is preferable, as an article of food, for the early and later periods of life, beef is the most suitable for youth and middle life, both because it requires more mastication in the eating, and also possesses more lasting and sustaining properties, for, being slower of digestion, it remains longer in the stomach as a supporting agent. For its amount of nutriment, see FOOD.

BEEF TEA.—This is so necessary an article of diet in the sick chamber, and its proper preparation of such consequence to the patient, that we believe the most approved forms of making it will be acceptable to every reader of the "Dictionary of Medical and Surgical Knowledge."

Before giving the best forms of preparation, it is necessary that the objects sought to be attained in making beef tea should be first explained, after which the necessity of observing the full directions will be more evident. The most important consideration, from motives both of benefit to the patient, and household economy, is first to extract every *particle* of nutriment from the meat, and, secondly, to cook it in such a manner as to realize to the invalid all the good that can *accrue* from its *employment*.

No. 1. Take of—

Lean gravy meat . .	1 pound.
Cold water	2½ pints.

Cut the meat into thin slices, put it in a saucepan, add the water, and let it stand by the side of the fire till it becomes gradually hot, and the scum rises; this is to be taken off, the lid replaced, and the whole allowed to simmer gently for an hour. Strain through a piece of doubled muslin, and, when nearly cold, pour all the clear liquor off from the settlement below.

No. 2. Take of—

Lean beef	1 pound.
Water	2 pints.

Beat the steak well with a roller, and then cut into thin slices, place in a saucepan, add a little salt, and, if desirable, pepper; pour on the cold water, boil for ten minutes, remove the scum, and boil for ten minutes longer.

No. 3. Take of—

Lean beefsteak . . .	1½ pounds.

Beat it well with the rolling-pin, and, after scoring its surface deeply with a knife, place it in a flat saucepan, with a little salt, and cover it with a pint of cold water. Simmer slowly for an hour, removing all the scum that rises; turn the steak in the saucepan, add two pints of warm water, with a little more salt, and boil slowly for another hour; strain while warm, and set aside to cool for use.

BEER.—The constituents of beer are the same as those of ale, the words, indeed, being nearly synonymous, with the exception that, in the country, beer is used to express a weaker kind of ale,—table, or small beer,—the substantive word standing for the best or strongest article. As a beverage, beer may be given with great advantage to patients recovering from long illnesses, or in cases of fever, particularly of a typhoid character; the carbonic acid contained in it, particularly when bottled, acting as a grateful stimulant. See DIET.

BEE, STING OF. See STINGS.

BEES'-WAX. — This useful animal substance, obtained from the honeycomb after the expression of the honey, is not only a valuable agent in the arts, but a most useful article, and a principal ingredient in many pharmaceutical preparations, entering into nearly all the ointments and plasters, and some few of the cerates, in the Pharmacopœia. Wax, *cera*, is of a bright yellow colour, a *pungent smell*, and of a close, tenacious *texture;* easily divided, but becoming, by two feet from the floor; the bottom should be made of laths instead of ticking, as admitting a freer circulation; a couple of mattresses, the top one made of horsehair and cotton, or wool, or instead, what is better, the French spring mattress, will be found more conducive to health and rest than a feather or down bed. The curtains should never be close drawn round the entire bed, and the top of the bed should be open. Children, as a rule, should never sleep on feather beds, or be closely surrounded by curtains.

For the invalid, numerous contrivances have been invented, in the shape of beds in which both air and water have been employed as a sustaining medium; of the latter, one of the most useful is made by filling a series of cylinders ot vulcanized India rubber (like bolsters) with water, and confining them together by cords, which, with a sheet and blanket over all, makes a light, elastic bed, which has the advantage of accommodating itself to every motion of the patient's body. See HYDROSTATIC BEDS, SLEEP.

BED SORES.—To the invalid, wearied by a long-continued fever, the irritation of spirit consequent on lying long confined in one locality, and the heat and vexation of a sleepless pillow, or to the patient suffering from the tedious injury of a simple or compound fracture, the bed in which he turns his fever-shaken limbs, or holds silent commune with his mangled flesh and crushed bones, becomes a question of paramount importance. Blessed with health and strength, man or woman can sleep anywhere, and, with a sufficient pad beneath them, as soundly on the boards as on the best spring couch that French luxury ever devised. But to the invalid it is very different: the mind is made irritable by disease; the skin becomes preternaturally sensitive, and being robbed by the rapid absorption of the thick adipose tissue, lying between it and the muscles, which formerly acted as a pillow, or soft cushion, to take off the pressure from any part, becomes also excessively irritable, and sensitive to the slightest inequality in the sheet, or the smallest roughness in the mattress or bed beneath, and, in a short time, gives evidence of the fact in the abraded condition of the cuticle. On this account, these injuries to the skin and adjacent parts have been called "bed sores," and as they often assume a very serious appearance, are attended with great pain and inconvenience, and *not unfrequently* terminate in gangrene or sloughing, their cure is a matter of importance; for as the skin, from the loss of the cellular tissue, and the sharp pressure of the bones beneath, has lost much of its vital energy and power of resistance, it soon begins to show the traces of its low vitality by discoloration, pain, and tenderness. From this stage of the mischief to the breaking of the skin, and the formation of an open running sore, the process is often extremely rapid, and it frequently happens that not till the whole hip, or a large wound on the back, is formed, is the medical man apprised of the injury, or called in to cure the mischief.

TREATMENT.—In the first stage of bed sores, when the cuticle is only inflamed, or of a dark colour, an application of collodion, or of the extract of lead, is generally found sufficient to suspend the diseased action. Whichever article, however, is used, the place should be carefully wetted for two or three times with the drug, and the piece of lint used for the purpose afterwards spread smoothly over the part. The same treatment is to be adopted when the skin is broken. Some persons bathe the part or parts with brandy and water, or with warm water, and some, again, with tincture of arnica; but these remedies are by no means so effectual as the course suggested above, of the collodion and extract of lead.

In cases where sloughing has taken place, the wound should be washed with a little spirits and water, sufficiently strong to produce a slight degree of smarting. The part is then to be wiped gently, and covered with violet or starch powder, fresh powder being added every two or three hours, till it forms a cake over the sore. No kind of bed can be of any benefit to one suffering from bed sores when they are once formed; the change should *take place before the evil is effected;* but when once established, instead of removing the patient to a different bed, a contrivance must be made to take off the pressure from the sores existing. For this purpose, a piece of thick buckskin, with a hole, large enough to admit the sore, cut out of the centre,—like a corn-plaster,—and its surface spread with soap-plaster, is to be put over and around the part, whether a mere discoloration, abrasion, or open sore. If one thickness of skin is not deep enough to keep off the pressure from the part, a circular pad, like a broad ring, of two or three inches thick, must be made, and placed in such a manner under the t's body, but encircling the plaster ssing, as will insure perfect freedom ontact of the sore with the bed. ut a pad, or open plaster, to pro- e sore, *no application can possibly the patient, or give the sores a of healing;* and no application ment, plaster, or lotion to a bed sore, the pressure of the body and of the taken off, can possibly effect any indeed, without such a mechanical ance they must all severally effect harm.

soap-plaster of the Pharmacopœia century ago, devised for this pur- nd whole sheepskins were spread t to lay over the patient's hips, nd back, but always with a result e harm that good. The plaster , the relaxed skin crumpled; and ticle fretted, by the plaster made sensitive, gave way at once under t crease in the relaxed leather of ster, and a sore was established by y remedy meant to prevent it.

F.—One of the most nutritious in the class of animal food, and, less easily digestible than mutton, ases of great debility, and where, poverished blood, the vital powers y low, preferable to every other kind -creating aliment. As mutton is ble, as an article of food, for the nd later periods of life, beef is the uitable for youth and middle life, cause it requires more mastication eating, and also possesses more and sustaining properties, for, being of digestion, it remains longer in mach as a supporting agent. For unt of nutriment, see Food.

F TEA.—This is so necessary an of diet in the sick chamber, and its preparation of such consequence to ient, that we believe the most ap- forms of making it will be ac- le to every reader of the "Dictionary ical and Surgical Knowledge."

re giving the best forms of prepara- is necessary that the objects sought tained in making beef tea should explained, after which the necessity erving the full directions will be vident. The most important con- ion, from motives both of benefit to tient, and household economy, is extract every *particle* of nutri- from the meat, and, secondly, to t in such a manner as to realize to valid all the good that can *accrue* ts employment.

No. 1. Take of—

Lean gravy meat . .	1 pound.
Cold water	2½ pints.

Cut the meat into thin slices, put it in a saucepan, add the water, and let it stand by the side of the fire till it becomes gradually hot, and the scum rises; this is to be taken off, the lid replaced, and the whole allowed to simmer gently for an hour. Strain through a piece of doubled muslin, and, when nearly cold, pour all the clear liquor off from the settlement below.

No. 2. Take of—

Lean beef	1 pound.
Water	2 pints.

Beat the steak well with a roller, and then cut into thin slices, place in a saucepan, add a little salt, and, if desirable, pepper; pour on the cold water, boil for ten minutes, remove the scum, and boil for ten minutes longer.

No. 3. Take of—

Lean beefsteak . . .	1½ pounds.

Beat it well with the rolling-pin, and, after scoring its surface deeply with a knife, place it in a flat saucepan, with a little salt, and cover it with a pint of cold water. Simmer slowly for an hour, removing all the scum that rises; turn the steak in the saucepan, add two pints of warm water, with a little more salt, and boil slowly for another hour; strain while warm, and set aside to cool for use.

BEER.—The constituents of beer are the same as those of ale, the words, indeed, being nearly synonymous, with the exception that, in the country, beer is used to express a weaker kind of ale,—table, or small beer,—the substantive word standing for the best or strongest article. As a beverage, beer may be given with great advantage to patients recovering from long illnesses, or in cases of fever, particularly of a typhoid character; the carbonic acid contained in it, particularly when bottled, acting as a grateful stimulant. See Diet.

BEE, STING OF. See Stings.

BEES'-WAX. — This useful animal substance, obtained from the honeycomb after the expression of the honey, is not only a valuable agent in the arts, but a most useful article, and a principal ingredient in many pharmaceutical preparations, entering into nearly all the ointments and plasters, and some few of the cerates, in the Pharmacopœia. Wax, *cera*, is of a bright yellow colour, a pungent smell, and of a close, tenacious *texture*; easily divided, but becoming, by time and close keeping, lighter in colour, and more hard and brittle.

Wax was formerly used in medicine in this country in diseases of the bladder, and in cases of dysentery, or diarrhœa; and though expunged as an internal remedy with us, is still used to some extent on the continent.

Wax is perfectly insoluble in water, and nearly so in ether and alcohol, though boiling alcohol dissolves a small portion, which is again thrown down when becoming cool. It mixes with oil and with the alkalies, uniting to form a kind of soap. *Cerine* is a white crystalline substance, and regarded as the active principle of wax. There are two kinds of wax kept in the shops, the natural yellow—*cera flava*, and the white—*cera alba*. The latter is obtained by melting the former, straining the hot liquid, and running it out in large thin sheets, when it is exposed to the influence of the sun and air to bleach. When of sufficient whiteness, it is again melted, and run into small, round, shallow tin saucers, when it obtains the form in which it is found in commerce.

BEET-ROOT.—A biennial plant, of a sweet taste, and deep red colour; a native of the south of Europe, and now largely cultivated in this country as a food for cattle, and in France for the sugar obtained from it. The beet-root, *Beta vulgaris*, acts medicinally as an antiscorbutic, and though not admitted into the Pharmacopœia, makes an admirable pickle, cut into thin slices and preserved in vinegar. In this form it becomes one of the *best pickles and antiscorbutics an emigrant can take with him on a long voyage*, as it not only makes his dry provisions and salt junk palatable, but is ever a handy and useful medicine, should scurvy show itself during the voyage. See EMIGRANTS, ARTICLES FOR.

BELLADONNA. — Fair Lady, or Deadly Nightshade; the *Atropa belladonna*, a plant perennial and indigenous to this country; belonging to the class *Pentandria*, and order *Monogynia*, and Natural order *Solanaceæ*.

CHARACTER AND PROPERTIES.—The belladonna grows on chalky soils, in shady places, flowers in June, and ripens into berry in September. The root is thick and fleshy, sending up green, downy stems about three feet in height, branching off into round, fleshy leaves, which are lateral, and in pairs of unequal size; the flowers are solitary and drooping, with a faint, narcotic odour; the berries are large, shining, smooth, and of a deep, rich purple colour, containing seeds of a sweetish taste, with a violet-coloured juice. The root and leaves are the only parts of the plant used medicinally. From the expressed juice of the leaves, and from all parts of the plant, its active principle, *atropa*, has been obtained.

Every portion of the belladonna is poisonous, though, from the tempting character of the berries, especially with children, it is the fruit of the plant that has most frequently proved fatal.

MEDICAL USES.—The diseases in which the belladonna has been most successfully given, are scirrhus, and cancer generally, chronic rheumatism, gout, paralysis, neuralgic affections, epilepsy, and hooping cough. It is, however, in the treatment of paralysis of the optic nerve, or amaurosis, and hooping cough, that the deadly nightshade is now almost exclusively confined. Belladonna is sometimes given in substance, beginning with one grain of the dried leaves, gradually increased; but this is both an uncertain and very unsafe mode of exhibition. An infusion made with a scruple of the dried leaves in 10 fluid ounces of boiling water is a safer mode of employing it, the dose being from two to four tablespoonfuls a day. The tincture, however, is much the safest form in which to prescribe it, the dose being from 3 to 15 drops three or four times a day.

The preparations of belladonna are, the tincture, *tinctura;* extract, *extractum;* ointment, *unguentum;* and the plaster, *emplastrum belladonnæ.*

SYMPTOMS OF POISONING BY BELLADONNA.—Extravagant laughter, accompanied with violent gestures; dryness of the mouth and gullet; great thirst, with difficulty of swallowing; nausea; remarkable dilatation of the pupil, with a drawing down of the eyelid. The face grows red and swollen, the pulse rapidly falls, becoming low and feeble; delirium sets in, with paralysis of the extremities, soon followed by convulsions and death. The body swells, blood flows from the nostrils, mouth, and ears, and a rapid decomposition sets in.

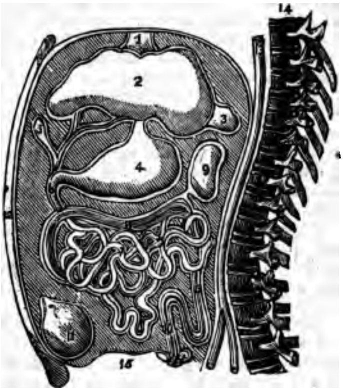
TREATMENT.—The stomach must be emptied immediately by an emetic of white vitriol or bluestone, by the stomach-pump, or by tickling the fauces after copious draughts of water.

As soon as the stomach has been relieved of the poison by any means of vomiting that can be procured quickly, and which will act effectively, draughts of vinegar and water, citric or lemon acid, mixed with water, or the juice of oranges, are to be given freely, to counteract the poison that may yet adhere to the coat of the stomach. Or if these cannot be procured, mucilage or gum water, honey, treacle or sugar, or any thick substance, to neutralize or involve any particle of the fruit or poison remaining. To overcome the stupor that ensues, the patient must be walked about, and cold water dashed in his face from time to time; and still further to stimulate the heart, the spine should be rubbed with turpentine and hartshorn, while ammonia, ether, and brandy are poured down the throat. These means must be persisted in as long as necessary, and with the utmost vigour, or death will outstrip all exertion. As soon as convenient, the bowels must be acted on by doses of castor oil. See POISONS.

BELLY, OR ABDOMEN.—That part of the body containing all the digestive and excretory organs, bounded above by the midriff or diaphragm, and below by the hollow of the pelvis. The belly is the largest cavity in the body, and is shut in on all sides by muscles, fascias, cellular tissue, and the integuments. Independent of the diseases to which the several organs contained in the belly are subject, the cavity itself is liable to certain affections; the principal of these are dropsy (see ASCITES), wind dropsy, tympanites or drum belly, and muscular pains of the part. The two last are the only affections to be noticed under this head.

MUSCULAR PAINS OF THE BELLY.—This disease is frequently induced by wet feet, or the application of cold or moisture to the belly, which very often produces tension of the entire surface of the abdomen, attended with considerable pain in the muscles of the part, accompanied by difficulty of breathing, especially if the patient endeavours to take a deep inspiration. The pain sometimes increases with a rapidity and amount of suffering almost resembling inflammation; from this, however, it is distinguished by the state of the pulse, the absence of sickness, and the relief that gentle pressure produces, the pain recurring when the pressure is removed.

Treatment.—The first object to be attended to in this affection is to relax all the parts affected, and then apply heat to the entire surface of the belly. To effect the first intention, the person must be laid on his back, the *head being slightly* raised by a pillow, and thrown a little forward; the legs are then to be drawn up till the thighs are at right angles with the body, the feet resting flat on the bed; the limbs are next to be parted, and the knees inclined outwards; lastly, the arms are to be laid straight along each side of the body. A flannel doubled, and wrung out of hot water, is then to be placed over the whole of the belly, as hot as the



SECTION OF THE ABDOMEN, SHOWING RELATIVE SITUATION OF THE ORGANS WITHIN THE CAVITY.

Perpendicular section of the Belly or Abdomen, designed to show the general, but not anatomically correct, situation of all the important organs contained in the cavity of the belly. The top line is meant to indicate the Diaphragm, or Midriff; that shelf-like muscle which shuts out the cavity of the Thorax, or Chest, from that of the Abdomen, or Belly. No. 1. Ligamentous attachment of the Diaphragm. 2. The Liver. 3. A portion of the Pancreas. 4. The Stomach. 5. The Gall-Bladder, with the Hepatic Duct. 6. Duodenum, where the Common Biliary Duct enters it. 7. Convolutions of the small Intestines, surrounded by 8, 8, the Transverse and Descending Colon, or large Intestine. 9. The Kidney. 10. The Rectum, terminating in the Anus. 11. The Bladder. 12. The cut edges of the muscles and integuments forming the front of the Abdomen, showing, above, the end of the Breast-bone, and below, the divided Pubis. 13. The Aorta, dividing into its two great branches of Right and Left Iliac Arteries. 14. The Vertebral Column, from the end of the Cervical to the beginning of the Lumbar Vertebræ.

N.B.—15. The line traced round each organ is meant to show the course of the investing *lining* membrane, the Peritoneum, which see.

patient can bear; this is to be repeated every ten minutes, or whenever the flannel becomes cool. This fomentation should be performed *under* the clothes, care being taken to wring out as much of the water as possible from the flannel, and, by the despatch used, to ensure a large amount of hot steam for the patient's benefit.

If material relief is not afforded after half an hour's fomentation, a tablespoonful of turpentine is to be added to the quantity of water poured out for each fomentation, and this employed in the same way and for as long a period. If the pain is excessive, 20 drops of laudanum, in a little brandy and water, may be given to an adult, either during the fomentation or after the abatement of the pain, to allay the tenderness felt over the belly; the patient, at the same time, is to be kept perfectly quiet for a few hours afterwards, a hot, dry flannel laid over the stomach, and, if necessary, a bottle of hot water applied to the feet. When the hot bath can be obtained, it should be used, and in the first stage.

The above cut represents a vertical section of the abdominal portion of the human trunk, designed to give a general idea of the relative situation of the most important organs contained in the belly, and the course of that delicate and highly important membrane, the *peritoneum*, which, like a man's nightcap, or *cul-de-sac*, not only lines every organ in the cavity, but also the muscles and all the parts forming the walls and enclosures of the abdomen.

Drum Belly, Tympanites, or Wind Dropsy, as it is sometimes called, is a disease in which the stomach and upper part of the large intestines are excessively distended with air, causing much inconvenience and great pain.

Causes. — Impaired condition of the bowels, a long course of indigestible or improper food, eating crude vegetables, abuse of spirituous liquors, and chronic derangement of the digestive organs.

Symptoms. — The disease occasionally comes on rapidly, distending the abdomen like a drum in a few hours; at other times its progress is slow, being preceded by frequent belchings and expulsions of the wind; at the same time, the belly swells, becomes tense and elastic, and, when struck, emits a sound like an inflated bladder or drum; colic pains, gradually increasing, accompany the disease, from *the commencement to the* height; the appetite fails; there is great thirst, hea of body, constipation of the bowels, an considerable difficulty in emptying th bladder.

Treatment.—Two objects are sought t be effected by the treatment—first, t expel the air, and secondly, to preven its accumulating again.

Two compound assafœtida pills are t be given immediately, followed every hou by a dose of the carminative mixtur below. Take of—

Carbonate of ammonia 30 grains
dissolve in—
Camphor water . . . 5 ounces,
and add—
Tincture of cardamoms ½ ounce.
Tincture of ginger, tincture of lavender, spirits of ether, of each . . . . 1 drachm.

Mix: two tablespoonfuls to be give every hour.

At the same time, the whole of th belly is to be rubbed for about fiv minutes every one or two hours wit camphorated oil, the oil being poure into the nurse's hand, and the palm an fingers used for the purpose of rubbin in the embrocation.

To make the camphorated oil, tak of—

Camphor . . . . . 2 drachms;
cut into fine pieces, put in a teacup, an pour on it—
Olive oil . . . . . 2 ounces,
then place in a warm oven for an hour o two, till dissolved: a small quantity o this oil is to be used at a time, as directe above.

If the symptoms are not materiall abated after three or four hours' employment of the means advised, an injectio consisting of the following ingredient should be given every four hours, for tw or three times.

To half a pint of warm gruel, add—
Turpentine . . . . 1 drachm.
Tincture of assafœtida . 2 drachms.

Mix, and administer warm, repeating on compound assafœtida pill every thre hours, till several effectual actions on th bowels have been produced.

To prevent a recurrence of the diseas great care must be taken to regulate th diet; all foods of a hard, indigestibl nature are to be strictly avoided, or an aliment likely to produce flatulence, or t ferment in the stomach. The patien should be impressed with the necessit of eating slowly, and never allowed t swallow his food till every mouthful has been completely ground, well mixed with saliva, and thoroughly masticated. According to the state of the bowels, one of the following pills must be taken every other morning, or one pill night and morning every second day. Take of—

Compound colocynth pill, and blue pill, of each	½ drachm.

Mix, and divide into 12 pills.

While the bowels are being kept gently open by these means, the stomach must be strengthened by a course of mild tonics, such as the following:—

Take of—

Calcined magnesia . .	½ ounce.
Rhubarb, and ginger, of each	1 drachm.
Carbonate of soda . .	2 drachms.

Mix in a mortar, and add—

Infusion of camomiles .	6 ounces.

Mix, and take a tablespoonful an hour before breakfast, dinner, and supper, shaking the bottle before each dose. After a short time, the pills should be taken only every third day, and ultimately once a week. The quantity of the mixture, in like manner, is to be reduced by degrees to a teaspoonful for a dose, and finally, like the pills, discontinued entirely.

During the whole course, however, the patient should accustom himself to out-of-door exercise, and for some time every morning sponge the neck, shoulders, chest, and stomach with cold salt and water, or cold water with a small quantity of vinegar, and afterwards employ the flesh-brush or a rough towel for several minutes over all the sponged parts, till a healthy circulation is established over the cuticle.

BENZOIC ACID.—A beautiful, flaky, crystallized salt, like scales of snow. Benzoic acid, sometimes called Flowers of Benjamin, is the product of the resin called benzoin, from which it is obtained by boiling the resin in a strong alcoholic solution of potass. Benzoic acid can be obtained from several of the aromatic resins and essential oils by means of heat and distillation.

Properties.—This acid has a warm, pungent, aromatic taste, a strong, agreeable odour, and leaves a slightly warm, bitter taste in the mouth. It is easily soluble in spirits of wine, but sparingly so in water, and is very volatile. The only preparation into which *it enters in the Pharmacopœia is the compound* tincture of camphor (*tinctura camphoræ composita*), or paregoric.

Medical Uses and Dose.—Benzoic acid acts as a stimulant, antispasmodic, and expectorant, and is eminently useful in all bronchial affections where stimulants are useful, especially in dry, irritating coughs.

Benzoic acid may be given in the form of pills with any simple ingredient, or with squill pill, when the dose is from half to 1 grain, three times a day; or it may be combined with sugar, powdered antimony, and camphor, in the form of powders, in chronic bronchitis, when it may be given in one-grain doses, repeated every six or eight hours.

BENZOIN, sometimes called Gum Benjamin.—This beautiful aromatic resin is obtained by exudation from the plant *Styrax benzoin*, a tree belonging to the Natural order *Styraceæ*, and is a native of Sumatra and the Spice Islands. The tree grows to the height of seventy or eighty feet; from this it is procured by incisions made in the trunk, boughs, and branches, when the sap, exuding, dries in the sun into a hard, brittle mass, extremely compact and odorous.

Properties.—The resin has an agreeable aromatic smell, and a warm, slightly bitter taste; is soluble in spirits of wine, and almost totally insoluble in water, though, like other resins, capable of suspension in that fluid by trituration. When submitted to a strong heat it yields benzoic acid, and combines with all the alkalies, forming *benzoates* of potass, soda, or ammonia. Though largely used in medicine, it is as an incense, and as an ingredient in French polish, and as a varnish generally, that the resin is principally employed. The only preparation into which it enters in the Pharmacopœia is the compound tincture of benzoin, *tinctura benzoini composita*, commonly called Friar's Balsam, which see.

Medical Uses and Dose.—Benzoin, when used in medicine, acts either as an expectorant in coughs, colds, and hoarsenesses, or as a styptic, to arrest bleedings, being sometimes employed internally for that purpose, either in the form of powder, or in small quantities of the tincture, mixed with syrup and mucilage in cases of spitting of blood; though its more frequent employment is externally to cuts and bruises, to arrest hemorrhage. The fumes of benzoin, when the resin is *sprinkled* on a hot iron or shovel, and the vapour inhaled, have of late been much recommended in cases of pulmonary or bronchial affections. Benzoin has been found very efficacious as a medium, when placed between the plates of a respirator, in old standing asthmas. A few grains mixed with stramonium, and smoked from a common pipe, is a remedy of remarkable efficacy in the same diseases.

Dose of the powder of benzoin, from 1 to 5 grains three times a day; and of the tincture, from 5 to 20 drops every four or six hours. For an ordinary cold, 10 drops may be put on a piece of sugar and taken two or three times a day, or just before going to bed. Benzoin is also used to make Court Plaster, which see.

BERGAMOTE.—A species of citron, or small orange, of an agreeable taste and pleasant odour. It is from the rind of this species of the fruit that the beautiful perfume, known as bergamote, is procured: so called, it is believed, from Bergamos, a town in Italy, where the best perfume is made.

BERIBERI.—A peculiar form of scrofula, found only to exist in the East Indies, and having several characters of the disease known in the West Indies as elephantiasis. This disease comes on with spasmodic twitchings of the lower extremities, darting upward to the chest and throat, and producing great debility, œdema, or swelling of the legs and body, accompanied by a congested state of the brain, drowsiness, and coma. Mercurial ointment, with camphor, rubbed into the body, accompanied with alterative doses of calomel, and the compound decoction of sarsaparilla, have been recommended as the best means of treating this singular disease.

BERRIES, POISONOUS.—Children often eat poisonous fruits, and manifest all the worst symptoms before the parent or medical man can decide upon the nature of the article eaten. As the name, however, is of secondary importance, and much valuable time may be lost in investigating the fact, the first object should be, to give the patient an emetic, and that, the easiest and quickest obtainable. White vitriol, if at hand, is the best; if not convenient, mustard and water, or salt and water, or simple warm water, will answer the purpose; exciting vomiting by tickling the throat with a feather, and repeating the water and vomiting, as long as there seems occasion, or till the fruit has been expelled, and afterwards giving vinegar *and water, or milk*, to the patient, to *neutralize the effect* of the poison in the stomach. See Poisons, Belladonna, Fool's Parsley, &c.

BETEL NUT.—The fruit or nut of one of the most beautiful, slender, graceful, and at the same time tallest of all the species of palm. The *Areca palm*, as the tree is called, is cultivated over all parts of India, on account of the high estimation in which the nut is held by the natives, for the purpose of chewing, and for the object of dying the teeth black, and imparting a deep red to the lips: colours regarded as a mark of beauty and distinction, especially by the females.

The nut is dried and cut into slices; it is then wrapped in the leaves of the black pepper vine, and sprinkled with quicklime, till sufficiently prepared. The slices are then carried about the person in a box, and offered, like snuff, as a mark of respect to every friend and acquaintance; it being regarded as an extreme rudeness to refuse the dainty offering. The Indians chew immense quantities of betel; intense black teeth and full red lips, the consequences of this habit, being esteemed a great mark of beauty.

BETONY.—There are two species of this plant, both natives of England, the Wood and Water Betony—the former growing in woods, and the latter in ditches; and though exploded from modern practice, were anciently highly esteemed for their medicinal virtues. The fresh leaves of both kinds were regarded as excellent applications for sores, wounds, and abrasions of the skin; and the woody betony as an admirable stomachic, and remedy for affections of the spleen and liver.

BEULAH SPA.—A once celebrated mineral spa, at Norwood, in Surrey, a which, up to thirty years ago, was a popular resort for the Londoners. The waters are strongly saline, and said to approach those of Cheltenham in their aperient and cooling properties. See Mineral Waters.

BEVERAGES. See Drinks.

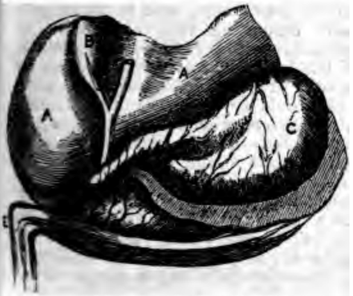
BEZOAR.—A Persian word, signifying a destroyer of poison. An earthy concretion, found in the stomach, intestines, and bladder of certain animals. This *Lapis bezoardicus* has been used in the East as an antidote for vegetable poisons.

BI, BIS, or BIN.—Two, or twice. A term used in chemistry and anatomy to express a duplex quantity, or a double head. Thus, in chemistry, when two atoms of carbonic acid are united to a certain proportion of potass or soda, the product is called *bi*-carbonate of potass, or *bi*-carbonate of soda, formerly denominated super-carbonate. In anatomy, when a nerve or artery splits into two tubes or channels, it is said to *bifurcate*, or fork.

BICEPS, or Two Heads.—The name of two muscles of the upper extremities, which, rising by two narrow tendons from different parts of the scapula, or shoulder blade, are inserted one into each radius, or outer bone of the forearm—the principle flexor of the forearm. Also the name of a set of muscles of the thighs, acting as flexors of those limbs.

BICUSPID. — Anything having two points; from *cuspis*, a point. Some anatomists use this word to define the teeth,—as the *cuspidati*, teeth with one point, or the canine; *bicuspidati*, teeth with two points, the two teeth immediately behind the canine; and the *multicuspidati*, or many pointed, the double or molar teeth. See Teeth.

BILE.—One of the most important secretions in the body; a thick, unctuous, yellow fluid, secreted in the liver, and carried to the gall-bladder; having a rank, heavy smell, and an acrid, bitter taste. The refuse blood from the lower extremities and great organs of the abdomen, on its return to the heart by the great ascending vein, *vena cava*, passes through the liver, where it is subjected to the action of certain secreting vessels, which, separating from it much of its carbon, and other impurities, forms a *new substance, called* bile, which, is carried by innumerable small vessels, that afterwards unite to form one tube, called the hepatic duct, terminating in the neck of the gall-bladder, and conveying to that receptacle all the secretion brought from every part of the liver. See Gall-Bladder.



THE BILIARY ORGANS.

A, A. The Liver, raised to show B, the Gall-Bladder, joined beyond its neck by the Hepatic Duct. C. The Stomach and commencement of the small Intestines or Duodenum, in which the common Biliary Duct terminates, D. E, Colon.

To be more strictly anatomical:—Proceeding from every part of the bowels, and membranes that surround them, are numberless small veins, which converge, and finally form one large trunk, called the portal vein, *vena porta*. This vein, entering the liver, immediately divides and subdivides over the substance of that gland, till it is diffused in the most minute ramifications. The blood conveyed by the *vena porta* is the darkest and most impure in the system. From the extreme termination of the venous filaments of this vessel arise a system of minute tubes—the biliary ducts,—which secrete from the impure blood the new fluid of the bile. These small vessels, uniting, finally form one large tube, called the hepatic or liver duct, which terminates at the elongated neck of the gall-bladder.

Functions of the Bile.—Whenever a quantity of digested food is passed out of the stomach into the duodenum, or beginning of the small intestines, a certain amount of bile is emitted from the gall-bladder on the digested aliment, at the same time that a peculiar fluid, like saliva, is poured into the same organ from the pancreas. The effect produced on the digested food by the emission of the bile and pancreatic juice is almost immediately to separate the digested matter into *two parts*, the solid and refuse portion, coloured with the bile, and a white, creamy fluid, the *chyle*, or nutrient principle of all the aliment consumed, and which, absorbed by the lacteal system of vessels, is carried through the glands of the mesentery, and by the thoracic duct, to the heart, to restore the waste suffered by the blood during its circulation through, and its construction of, the body. See Digestion, Chyle. Besides acting, in a manner, as a renet, to separate the nutritious from the refuse matters of the stomach, the bile acts as a natural stimulant to the bowels. Bile is an organic fluid, consisting of—

Free soda,
Muriate of soda,
Phosphate of soda,
Phosphate of lime,
Albumen,
Resin,
Yellow colouring matter,

Picromel,
Oxide of iron, and
Water.

The use and importance of the bile in the animal system has been satisfactorily proved by physiologists in their experiments on the lower animals, for where the biliary duct has been made to discharge its secretion *through the side of the dog or cat*, though the appetite was uninjured, the animal, although fed on the richest aliment, pined, became emaciated, and died, clearly showing that without the bile to act on the digested food, no nutriment could be extracted from it. In other cases, where the animal, on the point of death, was allowed to lick the bile exuding from his side, he rallied, and once more regained flesh; this experiment showing that even a small quantity of the bile mixing with the saliva was sufficient to ensure a partial separation of the chyle from the food.

It will now be seen how important is this secretion to the health and strength of the body, and the reason why persons become emaciated when any diseased action obstructs the entrance of bile into the duodenum, and why so many complaints result from a derangement of the liver, the manufactory of the bile.

Any cause that leads to a divergence of the bile from its natural course, is certain to result in some functional disturbance. When, for instance, the bile enters—by regurgitation, as it is called—the stomach instead of the duodenum, it is taken up by the blood, enters the system, and produces nausea, sickness, headache, giddiness, and many of the symptoms of a narcotic poison; and showing itself in the capillary and smaller veins, tinges the eyes, nails, and skin of a yellowish colour, as in jaundice. Such disturbances are called *biliary affections*, or liver complaints, and, in general, proceed from a redundancy or a deficiency of bile.

A Redundancy, or Excess of Bile.—The persons who are most frequently affected with this functional derangement are those who live well and richly, take but little exercise, and generally indulge, both by eating and drinking, in the pleasures of the table, producing a state of system in which the excess of carbon in the blood is very great, loading that fluid to repletion with the elements that constitute the proximate principles of bile; and in consequence of the stimulus such blood gives the liver, the secretion of bile *is in such cases unusually great.*

Symptoms.—The indications afforde the physician by a redundancy of bile are gradual loss of appetite; dry, irritabl skin; thirst; headache; dry, bitter tast in the mouth; dimness of vision; pains i the back and loins; nausea; sickness and, generally, relaxation of the bowels After a time, the pain in the head increases specks occasionally float before the eyes the sickness and vomiting become constan and exhausting, and the relaxation degenerates into diarrhœa, or violent purging The water, at the same time, is ofte scanty, high coloured, and throws down reddish sediment. According to the severit of the attack, these biliary affections ar either called mere sick or bilious headaches, or English cholera; in which latte case, the only additions to the symptom narrated are those of cramps in the leg and abdominal muscles, and great prostration of strength.

Observations.—Though the above chai of symptoms are generally regarded a constituting a disease, they are, in fact collectively, nothing more than the resul of the efforts of nature made to get rid o a redundancy of bile, that, as it cannot b used for its natural purpose, acts on th system as an irritating poison, and which by vomiting and purging, nature endeavours to expel from the body.

The *Treatment* is, consequently, ***not t*** *check* those efforts, at least, too hastily but to assist them; and as vomiting i more exhausting than a diarrhœa, t endeavour to carry off the superabundanc of bile by the bowels rather than by th mouth. In all severe cases, the warm bath should be the first remedial mean adopted, accompanied with friction ove the whole body with a towel, or flesh brush, while in the water. One of th following pills is next to be given ever four hours, for three or four times, and i the sickness is very great or exhausting one of the effervescing draughts ever half hour; at the same time, a small mustard plaster is to be laid on the pit of th stomach for ten or twelve minutes, or a blister, the size of a crown-piece, place on the same spot, and retained till i rises.

Pills.—Take of—

Blue pill	1 scruple.
Compound rhubarb pill	15 grains.

Mix, and divide into six pills.

Effervescing Draughts.—No. 1.—Tak of—

Carbonate of ammonia	2 scruples.
Carbonate of potass .	½ drachm.

ı—
. . . . 6 ounces.

·Take of—
c acid . . . . 1 drachm.
ı—
. . . . 5 ounces.

r. . . . . . . 1 ounce, or
poonfuls. Mix.
tablespoonfuls of No. 1 mixture
ıbler, and then add two table-
of No. 2; stir, and directly the
g commences, let the patient
lraught..
ıes benefit, in arresting the sick-
ained more quickly by drinking
om each bottle separately, and
ıe effervescence to take place in
h.
grains of carbonate of soda,
in a little water, with a tea-
f brandy, and the addition of
f tartaric acid, will produce an
g draught of nearly the same
the mixtures No. 1 and 2, only
ıvenient. It may be necessary
lack draught after one or two
he pills, where the bowels are
ıs is sometimes the case when
ng of bile is severe and copious,
ıat the redundancy has entered
ch, leaving the bowels almost

er treatment consists rather in
ic than medicinal means, and
an entire change of diet, an
of all rich dishes, or excess in
ng or drinking; exercise in the
nd a close attention to the state
estive organs; all fatty or unc-
d being rejected, with eggs,
puddings, or poultry; and, for a
ast, the diet must be confined to
ed or broiled meat, with pota-
l, and a little weak cold brandy
y and water as a beverage after-
ll wines must be avoided, unless
erry, in water, for dinner; in the
, ale and malt liquor generally
prohibited, though when a
er ale can be procured, a small
nay be taken, as a change from
s and water, with advantage.
re other causes for a redundancy
ides the most frequent one we
en, but as they proceed from
f the secreting organ, they will
d more fully under that head.
R.
ENCY OF BILE.—*Symptoms.*—

This condition of the biliary fluid is usually indicated by loss of spirits and bodily energy, pallor of the skin, muscular relaxation, lassitude, weariness, pains in the back and between the shoulders, loss of appetite, irregularity of the bowels, and absence of colour in the discharges, which appear of a clayey character, proving the entire absence of bile. The tongue is white, and furred towards the root, or is entirely covered with a white coat; the pulse is feeble, and the disposition made peevish and irritable.

Treatment.—This should, if possible, commence with a warm or tepid bath, with friction, and, an hour afterwards, a saline aperient draught given to the patient, composed of half an ounce of the phosphate of soda, and half an ounce of Epsom salts, dissolved in a tumbler of water; one of the following pills every four hours, and a cupful of dandelion tea four or five times a day, and, if the bowels require it, the saline draught may be repeated the first thing every third morning.

Pills.—Take of—

Blue pill	36 grains.
Compound rhubarb pill	2 scruples.
Powdered Colombo . .	12 grains.
Extract of dandelion .	enough to

make a mass, which divide into twenty-four pills.

Dandelion Tea.—Take of—

Clean washed dandelion roots, cut small . .	3 ounces.
Liquorice root, cut . .	½ ounce.
Orange peel	2 drachms.
Water	2 quarts.

Simmer slowly for three hours, or till reduced to three pints; strain, and add—

Powdered nitre . . . 1½ drachms.

To be given when cold.

The diet in this case of biliary affection should be full and stimulating, though all excessively rich foods, or made dishes, should be avoided. The beverage may consist of either wine or cold spirits and water, at dinner, or, where ale can be taken, a claret glass of the best Burton, or Wiltshire, made bitter with a little tincture of hops, will be found particularly beneficial, and infinitely superior to the weak article known as bitter ale.

It is in affections of this nature where the system, from a want of the carbonaceous element, so requisite for the formation of bile, derives benefit from broiled bacon at breakfast, and in which that article of luxury will be frequently found most serviceable to a patient, especially as it compels the necessity of eating a larger amount of bread than would be otherwise taken; and as the bulk of the *ingesta* is the natural stimulant of the bowels, the more solid food that can be taken in the morning the better will all the functions of the body perform their daily duty. For further remarks on this head, see Indigestion.

The waters of Bath, Harrowgate, and Cheltenham, will be found extremely serviceable in all chronic cases of this nature, and, indeed, in all long standing affections of the liver.

BILIARY DUCTS.—By this term is understood the hepatic, or liver duct; the cystic, or biliary duct; and a continuation from the union of these two, called the common duct of the bile, which carries the secretion into the duodenum.

The hepatic duct carries the secretion to the neck of the gall-bladder, or the cystic duct, the last, or common excretory duct, being merely a continuation of the other two. The diseases to which these parts are liable will be treated of under Gall-Bladder and Gall-Stones.

BILIARY FEVER.—This is quite a popular, but by no means a medical term, for many diseases familiar to this country; the only form of diseased action that such a name could be, with any propriety, applied to, is the *Typhus Icterodes*, or "Yellow Fever" of the West Indies, which see.

This term, therefore, and the still more vague one of *biliousness*, so often misused, are neither based on pathology nor medical warranty. The only forms of disease that arise from bile are what we have stated. This fluid, as we have shown, is poured into the beginning of the small intestines, separating the chyle from the refuse of the ingesta, and acting as a natural stimulant to the bowels. When this secretion is in excess, it produces the sickness and diarrhœa which we have described, and which is too often misnamed bilious fever. When deficient in quantity, or vitiated in quality, loss of appetite, indigestion, and constipation are the general consequences, as shown above; and when the bile is not properly separated from the blood, another train of symptoms is induced, for the fluid then mixes with the circulation, and jaundice is the consequence.

BILIARY FORMATIONS or CALCULI.—These concretions, similar to those in the bladder, are found in the bile, and collect in the gall-bladder; and, like the *urinary calculi, may either* be so small as to pass without trouble, or so large as to lead to serious results. For their formation and treatment, see Gall-Stones.

BILIOUS HEADACHE. — A distressing and oppressive headache, chiefly confined to the front of the head, or the forehead, with dimness of sight, an intolerance of light and sound, and what is often called a splitting headache. Such attacks may come on in an hour, or they may make their approach by slow degrees, and continue for some days, and either abruptly pass away, or gradually decline with the same regularity with which they approached. Beyond a loss of appetite, and incapacity for light, noise, or business, such headaches are not frequently attended by any other symptom worthy of remark.

Treatment.—A warm bath will always afford relief, and not unfrequently entirely remove the exciting cause. When this cannot be used, a four-grain blue pill should be taken immediately, and the following morning, a compound colocynth pill, while the stomach should be as little interfered with as possible; an Abernethy biscuit, and a small quantity of weak spirits and water, cold, will be found the best diet till after the action of the bowels by the medicine. For a more ample account of the treatment, see Bile, Redundancy of, and Headaches.

BILIOUS TEMPERAMENT is that condition of the system where the biliary secretion is ample, without being in excess, imparting vigour, power, strength, and activity to the individual, and stimulating him to the performance of important, if not of great, achievements. See Temperaments.

BINDER.—The name of a broad bandage, used to cover the abdomen of females after confinement, to act as a girth and support. Some practitioners apply the binder before the labour commences, and tighten it as it proceeds. This, however, is a clumsy practice, the bandage being more frequently in the way at such times than useful. See Labour.

BIRTH, REGISTRATION OF.—By Act of Parliament, every father, mother, or occupier of a house, within which a child is born, is *compelled* to give information of the fact within *forty days* to the registrar of births, deaths, and marriages for the district in which the child is born, that the same may be duly registered. If from any cause this obligation has been neglected to be complied with at the time, the omission can be rectified, at any date *within six months*, upon a proper declaration to the registrar, and the payment of the fee of two-and-sixpence or five shillings, according to the length of time that has elapsed beyond the six weeks granted by law. Many parents have a mistaken idea that registration does away with the necessity of baptism, and *vice versa;* but this is a grave error. The registration is a mere civil obligation, and equally compulsory on a Mahommedan or Jew as on a Christian. The church rite is a religious ceremony, in which the age of the child is quite immaterial.

BISHOP.—A mulled wine, made with bitter oranges, loaf sugar, and claret, very excellent as a posset, and particularly when used for colds. See DRINKS.

BISMUTH.—A reddish white metal, usually found in tin mines, of a soft, brittle texture, easily fused; soluble in the acids, and having a specific gravity of 9·822. Bismuth is generally found in combination with oxygen and sulphur; in the former state as bismuth *ocre*, and in the latter as bismuth *glance*. It is also found in combination with copper and lead. In pharmacy, the subnitrate is known as the *magestery* of bismuth; and the sublimed oxide as the *flowers* of bismuth; while the chloride of the metal is called the *butter* of bismuth. Bismuth is used in the arts, to make Newton's fusible metal; in the formation of type, pewter, and sometimes of brass or pinchbeck.

MEDICAL USES. — Medically considered; metallic bismuth has no effect on the system, and the only one of its salts used is that of the subnitrate; but even this, from its almost insoluble nature, exercises but a limited action on the body. The subnitrate has been employed in certain conditions of the stomach, as a tonic and antispasmodic. In gastrodynia, a painful affection of that organ, and chronic dyspepsia, and repeated vomiting, this preparation may be often given with good effect in doses of from 3 to 5 grains, every four hours, mixed with honey, jelly, or extract of hops, or in dandelion. As an external application, the white oxide was at one time very largely used, either as a dusting powder, or combined with white ointment to dry up ill-conditioned sores, and as an application to cutaneous diseases. In a large dose it acts as an irritant poison; and as it not unfrequently contains arsenic, its use is by no means free from danger. It enters largely into the preparation known as *Pearl Powder*, used so extensively by ladies both on and off the stage; and very serious consequences often arise from its constant employment as a cosmetic, as is shown by paralysis of the mouth or eyelids, and other serious effects often resulting from its employment.

BISTORT, OR SNAKEWEED.—This native plant, the *Bistorta polyginum*, belonging to the Natural order *Polygonaceæ*, though now but seldom used in medicine, was at one time highly esteemed in all cases of malignant small-pox, measles, plague, and other formidable diseases, from its supposed efficacy in expelling all poisonous matters from the system.

The form in which the bistort is generally given is that of decoction, either combined with mallow, the sweet flag, or in a powder of the dried root; the dose of the former, according to its strength, being from two to four tablespoonfuls three times a day, and of the latter, 20 grains, night and morning. Little reliance can, however, be placed on its efficacy.

BISTOURY.—The name of a surgeon's instrument; a long narrow-bladed knife, usually carried in the pocket case. There are three sorts of bistourys, the straight, the curved, and the blunt-pointed bistoury.

BITES AND STINGS.—It is only when excited that animals bite; but when roused to anger, a kind of *virus* or poison seems engendered in their saliva, which, when inserted into a wound, as that made by their teeth, is more or less certain to produce painful consequences.

Though enraged, and often in a state of violent passion, an animal is yet far from being mad; and though the dog is more prone than other quadrupeds to that fearful disease, hydrophobia, it is, fortunately, very rare. See HYDROPHOBIA.

The animals from which bites are most frequently received are dogs, cats, horses, rats, and sometimes men. It is only when the bite occurs on an uncovered part that the injury inflicted deserves any consideration, for the teeth passing through the leather of the boot, or the cloth of the coat or trousers, are generally cleansed from their poisonous saliva, and the abrasion and puncture on the skin are consequently clean. *This is a fact that should always be pointed out to the person bitten, as a means of alleviating that fearful alarm that almost always attends such an accident,* and not unfrequently leads to serious consequences. The reptiles and insects, whose bites, or more properly stings, produce painful consequences, are several varieties of snakes, adders, vipers, wasps, hornets, bees, mosquitoes, and some still smaller insects of a parasitical character.

The TREATMENT of all these is so nearly alike, that it may very safely be generalised under the two headings, that of bites and stings.

BITES.—Whether the teeth have passed through a cleansing medium before touching the skin, or not, the part should be instantly washed with a sponge and warm water, using fresh water on each application of the sponge; a piece of lunar caustic, sharpened to a point, is then to be freely used, both in the wounds or punctures made by the teeth, and on the edges and surface of the abrasion, the caustic being freely inserted into every indentation. A pledget, soaked in cold water, is then to be laid on the part, the patient placed in bed, and if an adult, a little brandy and water, with 25 drops of laudanum, given as a composing draught. Where the animal has been very much excited, and there is great pain in the bitten part, a dry cupping-glass should be applied after the first rapid washing of the punctures, or they may be cleansed by using the mouth, and *sucking* the saliva from the wound, which should be again washed, afterwards bathed with hartshorn, the wet pledget applied, and either the draught above given, or 30 drops of sal volatile, and 10 drops of sulphuric ether, mixed in a wineglass of camphor water, given immediately, if there is much faintness or anxiety of mind; and the brandy and laudanum draught taken upon the patient being put to bed, when the dressings have been completed. The above treatment, with rest, and care taken to raise the patient's spirits, and disabuse his mind from the dread of after consequences, will generally be found sufficient for all cases of this nature, in this country at least.

Treatment of STINGS.—There is only one reptile in England whose sting produces serious consequences—the adder; though in all our colonies there are many varieties of poisonous reptiles: of these, the most dreaded are the cobra di capello, the rattle snake, whip snake, and some others; the potency of the venom emitted depending upon the nature of the reptile; the symptoms being, however, nearly all alike, or only differing in degree, *and the time* the *virus* takes to produce its effects; and as we are unacquainted with any *certain* remedy to neutralize the poison, the great aim of the practitioner is *first* to endeavour to prevent the *virus* from being absorbed by the blood, and so carried into the system; *secondly*, to remove as much of it as possible from the part; and *thirdly*, to carry the patient over the season of collapse and nervous prostration that supervenes.

Symptoms.—The sting of reptiles is not always followed by pain, though, in some instances, it is succeeded by instant and acute suffering; in others, again, there is no pain, or at least, very little. Discoloration and swelling of the part follows directly, attended with faintness, sudden loss of strength, pains in the back, throat, and head; difficulty of breathing; the face becomes pale, a cold sweat breaks out, and spasms succeed; drowsiness, with coma and death terminating the case, in from 15 minutes to 20 hours, if not relieved.

Treatment.—If the puncture is in the leg or arm, the most immediate duty is to tie a string or bandage tightly round the limb, between the injury and the heart, or above the wound, so as to prevent the poison from passing by the absorbents into the system. If the part is within reach of the person himself, as it would be if on the arm or hand, he should directly afterward apply his mouth to the puncture, and suck it for some minutes; when this cannot be done, and no friend or bystander will perform this necessary duty for him, the bandage having been tied above the part, the wound is to be quickly washed with warm water, constantly changed, the fingers being used to force out any blood or collection that may remain in the puncture, and if the cupping instruments are at hand (a dry glass is to be instantly applied, in default of the cupping-glass), the same effect may be extemporized, by putting a few drops of ether, spirits of camphor, or alcohol, into a wineglass, setting light to the spirit, and the instant the air is exhausted, placing it over the injury, when it will act with all the power of a cupping-glass. On removing the vessel, the place should be again washed, the glass re-applied, and, on its being finally taken off, the nitrate of silver, or caustic, is to be freely used, both within and without, the part finally covered with a wet pledget, and the patient put to bed.

During the time these services are being performed, the faintness and debility that comes on so rapidly must be met with small doses of ether, brandy, and ammonia, as in the following prescription. Take of—

Camphor water . . .	4 ounces.
Spirits of sal volatile .	3 drachms.
Spirits of ether . . .	40 drops.
Tincture of assafœtida .	20 drops.
Brandy	2 ounces.

Mix: two tablespoonfuls to be given every 10 or 15 minutes.

It is during the period of prostration that follows some hours after the accident when all the skill of the medical man is required to counteract the dangers of nervous and muscular debility; for this purpose the following mixture should be given every three or four hours, with ten drops of Fowler's solution of arsenic in a tablespoonful of water, three times a day.

Take of—

Infusion of valerian .	4½ ounces.
Tincture of lavender, compound	½ ounce.
Tincture of musk . .	1 drachm.
Tincture of castor, compound	2 drachms.

Mix, and give two tablespoonfuls every 3 or 4 hours.

After a few days, those antispasmodic remedies may be, generally, discontinued, and a course of sarsaparilla and quinine, with a Plummer's pill at bedtime, substituted, with occasional stimulants. If electricity can be procured, occasional shocks should, in the early stage, be passed along the patient's spine; or else the whole length of the back bone rubbed with a stimulating lotion of camphorated oil with turpentine and oil of amber. For the drowsiness and coma, that sometimes proves a very dangerous symptom, the patient is to be walked about, or submitted to the shower bath, or sudden aspersions of cold water; the rest of the treatment consists of a liberal diet, gentle exercise, and the daily use of wine or tonic beverages, such as stout, or half-and-half. The treatment in case of insect stings is very simple; when the sting is left behind, as is sometimes the case, it should be taken out with a pair of fine tweezers, or forced out by the fingers being pressed on each side of the puncture. The general remedy recommended, as a lotion, to all venomous stings of insects, is hartshorn; this, though a useful article, is by no means equal to one that may be applied in every case of the same nature, and which has the extra advantage of not causing pain, which the *ammonia does.* This article is the extract of lead, applied unadulterated to the part or parts, when it will not only ease the pain, and subdue the inflammation, but cause the absorption of the small hard swellings that usually follow the stings and bites of mosquitoes, wasps, fleas, and other insects. A piece of lint well wetted with the extract of lead, and laid upon the part, will generally be found sufficient for all purposes. Elder flower water is a very excellent wash for the face, especially if a little of the extract of lead is added, in the proportion of a drachm to a pint; and in warm climates this will be found a great protection against the assaults of such troublesome insects.

Stings are sometimes dangerous when they are given in the throat, or in the mouth. For the injury to the throat, should the lead prove insufficient, — a hardly likely circumstance,—the following lotion may be employed:—

Dissolve a drachm of carbonate of ammonia in 2 ounces of vinegar, and when the effervescence has passed off, add 1 drachm of sulphuric ether; mix; and with this bathe the part freely and frequently.

BITTERN.—A name used in salt-works for what is known as the mother water,—the supernatant liquor, after the first precipitate has been thrown down. Salt water having been boiled, and the salt in it precipitated, the residue is the article known as bittern. From this liquor, which is a solution of an impure sulphate of magnesia, Epsom salts and bromine are procured. See Epsom Salts.

BITTERS.—All bitters act beneficially on the human frame, and, according to their strength and qualities, are either tonics or correctives; many of them exercising other properties, such as being vermifuge and febrifuge, — destroying worms, and correcting febrile action. See Tonics.

BITTER-SWEET.—The English name of the plant *Solanum dulcamara.* See Woody Nightshade.

BITUMEN.—A mineral pitch which is supposed to be formed in the earth, in certain favourable situations, by the decomposition of animal and vegetable matters. Bitumen is the base of all the inflammable and natural oils, whether obtained from springs in the rocks, or from natural wells in the earth. Bitumen is of different consistencies in different latitudes, and is found in one or other form in every part of the globe. When very light and liquid, it is called *naphtha;* when thick, like treacle, *petroleum*, or *Barbadoes tar;* when tough and hard, it is named *elastic bitumen;* and when still firmer and almost malleable, is called *maltha*, or *mineral caoutchouc;* and in its last stage of induration obtains the name of *asphaltum.*

Bitumen has a strong, pungent smell, and a hot, bitter, and aromatic, though nauseous taste. Bitumen is seldom used in medicine, though some of its purer forms are, especially as external stimulants. Bitumen was used by the Syrians and Babylonians in building their houses and cities, and was the *slime* mentioned in Scripture as used on the plain of Shinar in building the first city. See PETROLEUM.

BLACKBERRIES, OR BRIARBERRIES.—A well-known wild fruit of delicious flavour, and one of the most wholesome native fruits we possess. Persons who have used the blackberry extensively, both as a preserve and made into wine, attribute the remarkable health enjoyed for years by their families to the giving of large quantities of blackberry jam to their children with their bread, instead of butter.

It is a cool, refreshing fruit in cases of fever; and a drink prepared with the juice of the fruit, mixed with water and a little vinegar, makes an admirably refreshing beverage. See FOOD, and DRINKS.

BLACK CURRANT. See CURRANTS.

BLACK DRAUGHT.—The common aperient mixture kept in the shops, and called by this name, is a mere infusion of senna with ginger, in which Epsom salts are dissolved. Each practitioner has a formula of his own for making this preparation. The following may, however, be adopted as a suitable mode of preparing this useful medicine. Take of—

Alexandria senna . .	1 ounce.
Ginger	2 drachms.
Cardamom seeds . .	2 drachms.
Boiling water . . .	1 pint.

Infuse for three hours; add—

Epsom salts	1 pound;

dissolve and strain; then add—

Tincture of senna, compound	3 ounces.
Spirits of sal volatile .	½ ounce.

Mix, and keep in a well-stoppered bottle. One ounce and a half, or three tablespoonfuls, makes the quantity usually *denominated a draught* by medical men.

The black draught, either alone, but, better still, as an adjunct to a blue or compound colocynth pill, proves a safe, efficacious, and reliable purgative for an adult male; and one ounce, or two tablespoonfuls, an effective dose for a female, *when* it is advisable to give females Epsom salts; while to children it is always a doubtful if not improper medicine.

BLACK DROP.—The name of a preparation of opium, once in great favour, supposed to be a concentrated tincture of opium or laudanum.

BLACK EYE.—In consequence of the extreme thinness of the cuticle over the eyelids, and the absence in that region of the cellular or adipose tissue that in the rest of the body lies between the muscles and the integuments, the slightest touch or abrasion will frequently cause the discoloration or *ecchymosis*, and tumefaction or swelling, which constitute the injury known as a black eye,—an accident which, though often very easily and innocently obtained, is so associated with riot and intemperance, as to be regarded as the most unfortunate of social misfortunes, confining the recipient to seclusion and privacy till the evidences of it have disappeared.

The cause of the swelling and discoloration proceeds from the rupture of some small vein, either the result of a direct blow, the accidental contact with some hard substance, or the slight abrasion of a coat sleeve, by which the blood is effused into the delicate texture beneath the thin cuticle, when, according to the size of the vein or the amount of blood effused, the swelling is either circumscribed or diffused, and the colour confined to a small spot, or spread over one or both lids. So injurious an impression of a man's character does a black eye convey, that even the most abandoned and reckless acknowledge to some degree of shame in exposing to public gaze a badge of such questionable respectability. Persons have, therefore, at all times, and surgeons in particular, exerted themselves to find a speedy, indeed immediate, cure for so injurious an accident; but in default of such a *panacea*, the sufferer has been content to make the *artist* his surgeon, and submit to the meretricious deceit of a *painted eye*, rather than brave opinion with the tell-tale brand upon him.

TREATMENT.—When the swelling is very considerable, and the patient is of a nervous and excitable temperament, and there is any danger of the eye being

r affected by the accident, it will
essary to apply three or four leeches
› lids or brow, and after having
aged the bleeding by fomentations
m water, apply the following lotion
y warmed. Take of—

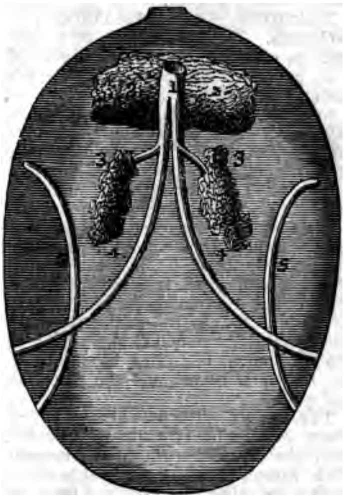
ammoniac	. . .	1 drachm.
nphor water	. . .	12 ounces.
egar	. . . . .	2 ounces.

Cloths wetted with this lotion are
pplied to the part for two hours;
ter that time the lotion is to be
l cold. Sugar of lead or white
either separately or united,
d in water, will also be found
as a good discutient lotion. But
edy is so brief in its action, and
ct in its effect, as the pure extract
, which, if applied within twenty
s of the injury, will dispel the
f the swelling, and *leave no mark*
A piece of folded lint soaked in
l is to be placed over the closed
l bound on the part, every five or
nutes continuing to re-wet and
he lint, taking care to keep the
ed. The next best article to cure
eye speedily, is the scraped pith
oot known as Solomon's seal: the
ing laid on a piece of lint, and
ed with vinegar, is to be placed
e discoloured eye, and left bound
part for some few hours. See
n's SEAL, and ECCHYMOSIS.

CK THRUSH. See THRUSH.

CK VOMIT.—A name given to
arge of dark-coloured bile from
mach in certain diseases of the
d biliary organs, and not un-
tly to the dark grumous blood
from the stomach in the disease
as *hæmatemesis*, or vomiting of
-in both cases, however, it is only
tom. See YELLOW FEVER, to
indeed, it more properly apper-

DDER.—This membranous organ
the receptacle of the water, lies at
tom of the pelvis, and below the
f the pubis, and is composed of
y some anatomists regarded as four)
the serous, or *peritoneal* coat; the
r, the *areolar*, and the internal,
, or lining membrane: and is
by anatomists into four parts—
e, the most posterior part, which
ainst the rectum; the *body*, the
of the organ; the *fundus*, the
portion of the bladder; and the
s continuation of the latter, and
stricted portion *which is connected* with the urethra. Besides the peritoneum, the bladder is retained in its place by ligaments and folds of the lining membrane of the abdomen. The accompanying cut represents the under side of the bladder, with the glands and organs attached to it, or such as have an immediate connection with the organ itself, or its function, each of which will be explained in its proper place.



UNDER VIEW OF THE BLADDER, SHOWING THE RELATIVE POSITION OF THE VARIOUS ORGANS ATTACHED TO IT.

No. 1. The Ejactatory Duct. 2, 2. The Prostrate Gland. 3, 3. Vesiculæ Seminales, with their ducts, forming, with 4, 4, the Vasa Deferentia, the common Ejactatory Duct. 5, 5. The Ureters.

The bladder, in a state of health, contains about 1½ pints; but as soon as more than that quantity is collected, an uneasy sensation is experienced, creating the desire to empty it. Two small tubes, one from each kidney, called ureters, descend through the cavity of the abdomen, and, reaching the bladder, terminate, one on each side, in the body of the organ: along these tubes, drop by drop, the urine distils from the kidneys into the bladder.

It is quite unnecessary, in a popular work such as the "Dictionary of Medical and Surgical Knowledge," to be more minute in the anatomy of this organ, or do more than observe that the bladder in the female is somewhat larger than in the male, and more spherical than oval, and that the prostate gland and other assistant organs are wanting in the female.

The bladder is subject to many diseases and accidents, requiring both the aid of the physician and the surgeon: of these the most important are inflammation, paralysis, hemorrhage, thickening of the coats, bursting and rupture of the bladder.

BLADDER, INFLAMMATION OF.—*Cystitis.* This disease, which usually runs its course in a very brief space of time, generally commences with the following chain of

SYMPTOMS.—Febrile indications; acute pain, with tightness and swelling over the region of the bladder—the pain being greatly increased by pressure on any part of the belly; and by a painful discharge of a scanty amount of high-coloured urine,—the frequent recurrence of a wish to empty the bladder being one of the most dreaded symptoms. Though the amount of water discharged is always small, it often comes away in drops, or the small stream is interrupted by a sudden stoppage, accompanied by a quick, sharp pain in the fundament, and often by vomiting; the tongue is coated, and the pulse full and quick.

TREATMENT.—The patient must be first placed in a hot bath for five minutes, and then bled in proportion to the urgency of the symptoms, and from eight to twelve leeches, according to the state of the pulse and the amount of tenderness and pain about the part, applied over the bladder or between the legs, and hot bran fomentations or poultices laid over the region of the bladder after the removal of the leeches. As soon as possible after the bath the following pills and mixture are to be administered. Take of—

Calomel	24 grains.
Powdered opium . .	8 grains.
Crumbs of bread . .	2 scruples.
Extract of dandelion .	enough to

make the whole into a mass, which is to be divided into twelve pills, one being given every three hours. Take of—

Mucilage of gum-arabic	2 ounces.
Castor oil	1 ounce.

Rub the oil down by degrees, till a smooth, creamy mixture is obtained; then add, slowly and gradually—

Infusion of linseed .	3 ounces;

mix thoroughly, and give two tablespoonfuls every three hours. Where the difficulty of passing the water is very great, creating much suffering, the following powders may be given instead of the pills, the mixture being taken as above. Take of—

Camphor	6 grains;

powder by means of a couple of drops of spirits of wine, and add—

Calomel	24 grains.
Dover's powder . . .	1 drachm.

Mix intimately, and divide into twelve powders, one powder being given in a spoonful of linseed tea every three hours. Sometimes it is necessary to give an injection of warm gruel with castor oil; and when the pain of making water is intolerable, a catheter must be passed into the bladder, and retained there by proper strings for one or two days, drawing off the urine from time to time. For a drink the patient should take frequent draughts of linseed tea in which liquorice root has been boiled, and the bowels kept steadily open by oleaginous mixtures, such as the one ordered, or by a dose of plain castor oil.

In cases of chronic inflammation of the bladder, the treatment so much depends on the other organs affected with it, that no regular system can be laid down; in general, however, stimulating emollient injections into the bladder are necessary, and a free use of the decoction of marsh mallows, linseed, and whortleberry, and sometimes pomegranate. See KIDNEYS, INFLAMMATION OF.

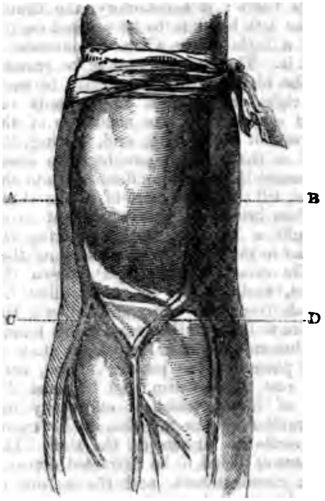
When earthy concretions form in the bladder, they produce great irritation, and a frequent desire to void the contents,—the stream being suddenly interrupted by the calculus or formation getting between the neck of the organ and the urethra. The presence of worms in the rectum lying immediately behind the bladder often occasions such irritation to children that, during their sleep, they frequently pass their urine without being conscious of the accident. For both these cases, see CALCULI, and WORMS.

The bladder is sometimes ruptured by a sudden blow or kick, when, in consequence of the urine being effused among the bowels and the delicate lining membrane, the accident is always a fatal case. See URINARY ORGANS, DISEASES OF.

BLEEDING, OR BLOODLETTING—Any artificial discharge of blood from the body, performed for the purpose of affording relief or benefit to an invalid. Bleeding is divided into general and topical, or constitutional and local. Bleeding from a vein or artery is an exampl ist; leeches, scarifications, and are instances of the latter. ion or phlebotomy, as bleeding is usually called, is performed nt parts of the body, though the generally selected are the neck, .and foot: the part by common dopted as the most convenient, the patient and surgeon, is the

rson may be bled either lying, r standing; but when at all faint during the operation, the sture should be adopted. It is s desirable to produce sickness g, so as to relax the muscles of as in cases of dislocation of the and rupture, when the person bled standing, and from a large

The arm has been selected for from the fact that the veins are minent there, and more easily t the bend of the arm than elset this spot there are *four* veins, in f which the surgeon may bleed. up the outside of the arm is *lic vein*, A; a corresponding ds on the inner side, called the *vein*, B. The median vein earm splits into two branches, ng obliquely outward to join the d called the *median basilic*, C, ther crossing obliquely inwards he cephalic, and called *median* D. Of these four, the ephalic and median basilic are most generally selected for the . In fleshy and robust persons, n basilic is the most convenient open, because it is the most t and the largest; but in thin iated individuals the median should be selected. And for sons: that under the first runs ial artery, separated from the stout people by some depth of issue, but in emaciated subjects ided by the thin fascia or ais of the adjacent tendon; ssing the median cephalic are es of the surrounding cuticle. ger of bleeding in the former is of *transfixing* the vein, and g the artery beneath, causing rism; while in the latter the be apprehended is pricking the filaments, and thereby causing . But as every part of the beset by risks of a similar r, the operator, bearing in mind ion given as respects *the median* basilic in persons of spare habit, and observing the following instructions, must take the hazard, and, as a general rule, select the ***median basilic*** vein for his operation.



VEINS OF THE ARM.

Mode of Proceeding.—Before commencing his operation, the person about to bleed must prepare his pledgets and bandage: the first consist of two slips of lint or linen rag, each slip folded up and doubled, one into a flat pad or compress about an inch square, the other a little larger and thicker; the bandage or fillet should be a piece of broad tape or ribbon 1½ yards long. Having arranged these necessary articles, he must provide himself with a basin and the handle of a broom, or any stick of similar proportions. The next duty is to select a fitting lancet, choosing one with rather broad shoulders, and bending the blade to nearly right angles with the handle. Having selected the vein, by grasping the arm for a moment with his hand, to make the vessels distend, the operator should place his finger on the vein he purposes to open; and if he feels an evident pulsation beneath, he must select another, unless he is a practical operator, and can open it without danger. The fillet is next to be doubled, and passed twice round the arm some few inches above the elbow *joint*, and, drawing it moderately tight, sufficient to show the veins, tied behind. He now takes the forearm in his left hand, and extending the limb, so as to stretch the skin, once more places his finger on the vein to feel if any pulsation exists below; if satisfactory, the thumb of the left hand is to be pressed on the vein a little *below* where he intends to open it. The lancet is now to be grasped by the blade, lightly but firmly, between the right thumb and finger, only the point and half of the shoulders of the instrument protruding, and, resting the hand on the other fingers, he is to insert the lancet in an oblique direction into the vessel, till the blood mounts to the skin; he then brings up the instrument in as straight a line as possible, *making the wound in the skin the same size as that in the vein.* He then puts down the lancet, and, taking the basin, lifts his thumb from the vein, and allows the stream to fall into the vessel in his hand; the broom-handle or any long stick is next placed in the patient's hand, both as a rest for the arm, and to assist the flow of blood, which it effects by the contraction of the muscles, as he opens and shuts his fingers on the staff. The amount of blood to be extracted depends upon circumstances, and the nature of the disease; the ordinary quantity is from 12 to 16 ounces. When sufficient has been taken, the bandage is to be untied, when the blood in general ceases to flow; whether so or not, when the tape is untied, the thumb is again to be placed on the vein below the opening, and the arm supported in the operator's hand, who, taking up the smallest pledget, wipes round the incision, and, pressing the two edges together, lays the compress on the top of the cut, securing it with the thumb while the thicker and larger pledget is being placed above it. In this manner, the arm in the operator's hand, and his thumb pressing the compresses, he shakes out the fillet, and, placing the centre of it on the compress, passes first one end and then the other obliquely over and under the elbow, in the shape of a figure 8, tying the two ends on the top of the compress: the cut in the vein heals very quickly, and in a day the bandage may be left off entirely. Sometimes, though the opening is sufficiently large, the blood will not flow: this often arises from the fillet being tied too tightly. All that is necessary, in that case, is to slacken the bandage, so as not to impede *the current in the* arteries, and after a few minutes the blood will flow steadily. Sometimes, in languid constitutions, it is necessary to plunge the hand and part of the forearm in hot water to induce the blood to flow.

When a vein is opened in the foot or instep, the process is nearly the same. As opening the external jugular vein is an operation of extreme delicacy, and could never be undertaken with safety by a non-professional person, we deem it unnecessary to describe the mode of procedure.

Arteriotomy.—The only artery that a non-medical person would be justified in opening is one of the branches of the temporal artery, which, in cases of apoplexy, or urgent affections of the head, might be rendered necessary. To effect this, all that is requisite is to stretch the skin tightly across the temple with the thumb and finger of the left hand; then, with a bistoury, make a small incision through the cuticle on the top of the artery, which, in turn, is to be opened with the point of the lancet, and the blood, as much as necessary, allowed to spring forth in leaps; three or four compresses being placed over it, and a firm and steady pressure established by means of the double-headed roller, as shown at page 87.

BLINDNESS.—Loss of sight may proceed from so many causes—organic disease of the eye itself, disease of the brain, functional disorders of the stomach, or from apoplexy, poisons, accidents, and blows—that it cannot be treated under one head, especially so indefinite a one as this. See Eye, Ophthalmia, Cataract.

BLISTERS.—A blister is any substance which, applied to the skin, raises the outer cuticle, or scarf-skin, in blisters or pustules, and fills the space between that and the true skin with a watery fluid, called serum, separated from the blood by the stimulating potency of the article employed. Blisters are either of the animal, vegetable, or mineral kingdom. The following are the chief articles used for that purpose:—

Spanish flies, or cantharides.

Mustard, euphorbium, mezereon, savine, croton oil, common nettle, and steam.

Tartrate of antimony, nitrate of silver, ammonia, nitric acid, acetic acid, and caustic potass.

Blisters are among the most valuable of the remedial agents which the physician possesses, and have this great advantage,—that without exhausting the patient, they deplete the system, frequently doing away with the necessity of bleeding, while, as an adjunct to that operation, they are invaluable.

In all inflammations, whether acute or chronic, in fevers, rheumatisms, and morbid formations or glandular enlargements, blisters are admirable; indeed, there are few diseases, whether of the blood or nervous system, in which they may not be made most useful.

The only articles used in this country for the purpose of a blister, are the powdered Spanish flies, Cantharides, which see; mustard, and tartar emetic. The blister plaster is composed of lard, suet, rosin, wax, and Spanish flies; a piece of which, from a drachm to two ounces, according to the size of the blister required, is spread upon a piece of adhesive plaster, first cut into the proper shape. The form in which the blister is made is, however, of no consequence, except it is meant for the head or the ears; all others may be either round, oval, or heart-shaped. For the head, when it is necessary to cover the whole scalp—a practice not so much approved of as formerly—the shape should somewhat resemble a boy's kite, only the tail part must be considerably shorter; when this is spread, the margin all round is to be deeply notched with the scissors, to enable it to fit the scalp when pressed down. For the ears, the shape is like the figure 6, the round part fitting under the lobe of the ear, and the top sweeping behind the cartilage of the ear. For the right side, the shape must resemble the 6 in its proper position; for the left, it must be reversed, thus—*d*. All blisters should have a margin of at least half an inch; the plaster must be spread with the thumb, smoothly and evenly, and not less than the thickness of a shilling in depth.

The time a blister takes to rise depends, first, on the part on which it is placed, and, secondly, on the temperament of the patient; the period, however, is generally between eight and eighteen hours. The best time to apply a blister is before going to bed, as the patient then generally sleeps through the stage of its rising. With children under ten years of age, it is not advisable to keep the blister on for more than five hours.

As soon as the blister has formed, the plaster has to be taken off, and the bag of fluid nicked with the scissors at the lowest part, to insure the escape of all the serum, *care being taken not to remove any of the skin*. A warm bread poultice—the slice of bread being enclosed in muslin—having been got ready *before cutting the blister*, is now to be placed over the whole surface, and kept on for an hour. When this is removed, the blistered part is to be dusted with violet powder, a little fresh powder being added from time to time. By adopting this method of dressing, all smarting, stiffness, and cracking of the new cuticle will be avoided, and the blister healed in a very few hours—a result that cannot be attained if either the part is washed, the cuticle removed, or a dressing of ointment put upon it.

Blisters are always liable to affect the kidneys, and, in some constitutions, produce a painful retention of urine. To counteract this inconvenience, the person should drink freely of barley water, with about a scruple of powdered nitre in each quart, during the time the blister is on, and for a short time after it is removed.

A mustard blister will generally rise in between twenty and thirty minutes, especially if it has been mixed with hot water, and applied thick. Mustard should be spread on flannel. When the plaster is removed, and the blister cut, it will be necessary to apply a warm bread poultice every half-hour for two or three times, before treating the surface with the violet powder. As the mustard blister causes considerable pain, and much local inflammation, it is only employed where strong measures are needed, and a powerful counter-irritation required.

Tartar emetic requires to be rubbed into the part for a succession of times before it evinces any semblance of blistering, which it finally effects by raising the cuticle in a crop of pimples, which ultimately become vesicles filled with serum, like small-pox. This form of blistering is chiefly employed for counter-irritation, to relieve some congested internal organ. See TARTAR EMETIC, OINTMENT, and ANTIMONY.

In hot climates, where a disease sometimes runs its course in twenty-four hours, it would be fatal to wait the slow rising of a blister of cantharides; a more expeditious plan is, therefore, adopted. A hole is cut out of a piece of buckskin leather, the shape or size of the intended blister; the margin of this shape is then spread with adhesive plaster, which is stuck on the patient's body in the part desired. The skin in the enclosed shape is then moistened with warm water, over which the surgeon freely rubs a stick of lunar caustic, when in a few minutes a large blister rises through the hole in the *leather*.

Should there be no caustic, a little wool is tied round a stick, so as to make a kind of mop, which, being wetted with strong liquid potass, is hastily passed over the enclosed cuticle, when the same result takes place. Strong vinegar, liquid ammonia, or nitric acid, rapidly brushed over the part, produces the same effect, the leather being used merely to prevent the material employed from running over the skin, and to confine the remedy to the part intended.

BLOOD, THE.—The blood is the common material of which all the tissues and organs of the body are built, whether the solid bone, or the most delicate membrane, and is, in fact, almost precisely analogous to the chyle, or nutrient principle of the digested food, with the exception of being destitute of the red colouring globules peculiar to the blood. The chief physical properties of blood are its *consistence, specific gravity,* and *temperature.* When first drawn from a vessel, the blood is thick, viscid, and tenacious; this consistency, soon after being drawn, changes materially, and the blood is converted into two parts,—the one a firm, solid mass, called the clot, *crassamentum;* and the other a thin, whey-like fluid, the *serum.*

The specific gravity of the blood is slightly heavier than water, which being taken at 1,000, that of the blood varies from 1,050 to 1,126. Arterial blood is always two or three degrees lighter than venous.

The more perfect the organization of the blood, and the higher its power of vitality, the denser it becomes; hence the blood of man is heavier than animals. The effect of disease on the blood is always to *reduce* its specific gravity; consequently, the blood is always lighter in disease than in health.

The temperature of the blood differs considerably in different animals. In cold-blooded animals and some quadrupeds it is higher than in man, in whom the standard is taken at 98°, though this, like its specific gravity, is materially influenced by disease; as in fevers, when the mean temperature is regarded as 100°. In particular fevers, again, there are special differences; thus, in the cold stage of intermittent fever, the blood has been found as low as 94°, and in some ardent fevers it has ranged as high as 102°, and even 115°. The temperature of *arterial* blood is generally between *one* and *two* degrees *higher* than *venous* blood. In *birds, the heat of* the blood is greater than in any other animal, and in the duck rises to 107°.

Blood is a heterogeneous, vital fluid, which, when drawn from the body, takes from ten to fifteen minutes to coagulate, or separate into the two parts of crassamentum and serum already explained.

The *crassamentum,* or clot—the solid portion found swimming in the liquid portion, comprising one-third of the weight of the whole—also consists of two parts; the largest and most important is a soft, elastic, tenacious, yellowish-white substance, known by the several names of animal gluten, coagulable lymph, fibre of the blood, and fibrin: it is on the presence of this fibrin that the coagulation of the blood depends, and the solid structure of every part of the body is owing; the other, and less important part, consists of the red globules, or colouring matter of the blood.

The *serum,* or fluid part of the blood, comprising two-thirds of the entire weight of that fluid, is a thin, transparent, homogeneous fluid, of a light straw colour, of a saline taste, and adhesive consistency. The physical properties of serum are, that it coagulates by heat into a white, compact mass, like the white of egg, or albumen, of which, in fact, it consists. Chemically, it is composed of uncombined alkalies and earthy salts; such as a muriate of potass and soda in combination with carbonate of soda, sulphate of potass, and phosphates of lime and magnesia. The amount of serum in the blood varies according to the state of health or disease. It is often in great excess, and is abundantly poured out into the cavities of the body,—as in all cases of dropsy, in Bright's disease, and water of the head; and again, discharged from the body in cholera. The amount of serum has been said to influence the strength and ferocity of all animals, being small in quantity in the carnivora, and large in sheep, cows, and the harmless ruminants. The blood not only maintains the life of every part of the body, but is itself alive, possessing all those phenomena peculiar to and characteristic of life. The quantity of blood contained in the animal body is always larger in the young than the aged, and in each part of the frame according to the importance of the organs to be nourished. The gross proportion of this fluid in man has been estimated at *one-fifth* of the whole weight of the body, which, if taken at an average of 150 pounds, would give 30 pounds of blood to the adult man. Of this quantity, one-fourth, or 7½ pounds, is supposed to circulate in the arteries, and called *arterial;* and three-fourths, or 22½ pounds, in the veins, named *venous blood.* These proportions are, perhaps, somewhat high, and, as a general rule, the maximum amount of blood may be estimated at 28 pounds. See CIRCULATION, RESPIRATION, and ANIMAL HEAT.

BLOOD, LOSS OF.—From whatever cause a large loss of blood has taken place, whether from external or internal hemorrhage—that is, from wounds and accidents, or from the rupture of a vessel, or flooding in labour,—it is always, when severe, followed by faintness, giddiness, loss of consciousness, and total insensibility, or *syncope;* the pulsations at the wrists or heart becoming imperceptible, and attended by cold extremities, great pallor of the surface, and a clammy sweat on the face and neck. This state of apparent death lasts for a longer or shorter time, the patient slowly recovering, first with an incoherency, amounting at times to delirium, yawning, sighing, sickness, a gasping, irregular breathing, and a gradual restoration of warmth and colour to the body. In fatal cases of hemorrhage, the symptoms are all progressively worse; the countenance paler and more sunken, the breathing more gasping and difficult, and, after a spasmodic or convulsive tremor, the patient, with a few irregular gasps, expires. The treatment must be in accordance with the exciting cause, which see, and SYNCOPE.

BLOOD, SPITTING OF.—*Hæmoptysis.*

SYMPTOMS.—These commence with a weight and oppression in the chest; a dry, tickling cough; a quick, sharp, compressible pulse; a saltish taste in the mouth; a flushed face; pain in the head; and more or less of blood expectorated by the force of a dry, irritating cough, either from the substance of the lungs, or from the bronchial tubes.

CAUSES.—These may proceed from a fulness of blood at a certain period of life, from previous disease of the parts, from accidents, and other causes. This disease is easily distinguished from *hæmatemesis,* or blood from the stomach, by the latter being vomited, coming away in larger quantities, and of a darker colour; whereas that spit up from the chest is in small quantities, and of a bright, florid colour.

TREATMENT.—It is seldom necessary, or even proper, to bleed from the system in this disease, though a few leeches applied over the *breast-bone will often* be found of great benefit. All excitement should be prevented, the patient kept on a low vegetable and farinaceous diet, and all stimulants avoided. The feet are to be kept hot, the general temperature cool, and the following acid and astringent medicines regularly administered. Take of—

Sugar of lead	2 scruples.
Powdered opium . .	6 grains.
Extract of hemlock .	1 scruple.

Mix, make into a mass, and divide into twelve pills; one to be taken every four hours, accompanied with frequent draughts of buttermilk, or else occasional mouthfuls of vinegar and water. Take of—

Infusion of rose leaves.	6 ounces.
Epsom salts	1 ounce.

Dissolve, and add—

Diluted sulphuric acid.	30 drops.

Mix: two tablespoonfuls to be given every six hours.

This treatment is to be persisted in for some time, the quantity of the sugar of lead being increased *one grain* in each powder on every occasion of renewing the prescription.

No danger can arise from the lead so long as a sufficiency of buttermilk or vinegar is taken after each dose of the pills, to insure the lead being kept by those means in a state of *acetate.* When the quantity of blood is serious, the hands are to be plunged into cold water, a napkin wrung out of cold vinegar and water laid across the chest, and the following powders given instead of the pills. Take of—

Powdered ipecacuanha	20 grains.
Powdered opium . .	2 grains.
Sulphate of potass . .	2 scruples.

Mix thoroughly, and divide into six powders; one to be given every half-hour or hour, till the violence of the bleeding is arrested. The feet are to be kept hot, the chest cool, acid drinks taken, the bowels acted on by the Epsom salts mixture, and the patient kept tranquil. See HEMORRHAGE.

BLOOD, VOMITING OF.—*Hæmatemesis.*

SYMPTOMS.—These are much the same as those just described, attended, however, with nausea and sickness, with the vomiting of a quantity of dark-coloured, grumous blood, mixed more or less with the contents of the stomach.

CAUSES.—The causes producing this disease may arise from long-suppressed *evacuations;* compression of the liver or *spleen,* the bursting of tumours, or from sudden violence, such as blows, &c. This disease is seldom fatal unless attended with organic mischief.

The TREATMENT consists in applying bags of pounded ice to the region of the stomach; giving a simple farinaceous diet; an occasional dose of grey powder, followed by a colocynth pill, if the liver be concerned in the disease; or the Epsom salt mixture prescribed in Spitting of Blood, with acid drinks: the same if caused by accident; but, if necessary, an opium pill at bedtime, or the pills prescribed in the last disease, with the same general directions. See HEMORRHAGE.

BLOWS are serious only when inflicted on parts where important organs are likely to be injured; thus, blows on the head and neck, over the heart and stomach, are more likely to be serious than elsewhere. Parts well covered with flesh are less affected by such injuries than the shins, or immediately over joints. According to the force with which the blow is given, it is followed by a rupture of one or more small vessels, by swelling, and discoloration. When delivered, however, on a dangerous part, and if likely to be followed by fatal consequences, the injured person becomes deadly faint, loses all physical power, and appears in a state of coma.

TREATMENT.—For injuries the result of ordinary blows, unattended with fracture, the treatment must depend greatly upon the situation of the hurt. If there be much tumefaction, leeches should be applied to the swelling, and the bleeding encouraged by a sponge and hot water, after which, the following lotion should be applied cold. Take of—

Sal ammoniac powder .	½ ounce.
Camphor water . .	1 quart.

Dissolve, and add—

Vinegar	4 ounces.

Mix. Keep the part constantly wet with cloths dipped in the lotion. If, however, the injury is over a joint, the lotion must be applied *warm*. When the blow has caused fainting and loss of power, brandy and ammonia, with ether, must be given in small doses frequently, cold water dashed on the face, and the spine rubbed with turpentine, oil, and hartshorn; and should the insensibility continue, the patient must be put to bed, hot water and mustard applied to his feet and legs, friction established over the heart and chest, and artificial respiration adopted should the state of syncope continue unabated.

BLUE DISEASE, or *Cyanosis*.—This is a disease that depends upon some original imperfection of the heart, by which venous blood becomes mixed with arterial,—usually the result of the valve between the right and left ventricle remaining permanently open, in consequence of which, the skin assumes the hue of the venous blood. This is purely a disease of infancy, only one case being recorded where the patient lived to the age of thirty-seven. See HEART, and ADVICE TO MOTHERS.

BLUE OINTMENT.—The popular name of Mercurial Ointment, which see.

BLUE PILL.—A protoxide of mercury, and one of the most valuable mercurial preparations of the Pharmacopœia. What the grey powder is in a dry form, the blue pill is in a moist one; each possessing analogous properties, and being chemically nearly alike. For mode of preparation, see MERCURY.

Medical Properties.—Blue pill exerts three distinct actions on the system, according to the dose in which it is given; viz., as an alterative, aperient, and sialogogue—or a medicine to excite the flow of the saliva. As an alterative, either alone, in doses of from 1 to 3 grains twice a day, or in conjunction with colombo or quinine; or taken with the decoction of sarsaparilla, it may be made to act either as an alterative or a tonic, or both. As an aperient, taken in doses of from 4 to 8 grains, it will be found to act as an easy, efficient, and satisfactory purgative, producing a full action on the bowels without any griping or inconvenience whatever. As a sialogogue, in doses of 1 grain every three hours, it is employed to act on the salivary glands, in cases of indigestion, or stomachic affections, proceeding from functional derangement of that organ. To enable the blue pill to act in this special manner—as a stomachic—it is necessary to continue its use for some time, and prevent its acting in either of the other two ways. To effect this, it is of importance to combine a substance with the blue pill, which will keep it in the system, and prevent its action on either the stomach or the bowels; that substance is powdered kino, which, when a sialogogue action is desired, should be mixed with the pill in the proportion of 1 grain of kino to 2 grains of blue pill. A two-grain blue pill, with 1 grain of kino, given every six hours, till the mouth feels tender, and an extra flow of saliva follows, will indicate the success of the action, when the blue pill may be dispensed with, and the following morning a couple of com-

colocynth pills given, succeeded,
sary, in six hours by a common
raught, which will carry off the
· from the system, and save the
from any risk of salivation, unless,
he should get wet during the time
g it. See SALIVATION.

E SKIN.—A condition of the body
tnessed in the collapse stage of
:holera. See CHOLERA.

ESTONE. — Blue vitriol, blue
, or the sulphate of copper, is a
salt, composed of sulphuric acid,
l, and copper, and found in a
ate in copper mines, from which
ained in large pyramidal crystals
) blue colour, of an acid, metallic,
ngly astringent taste, and easily
n water.

al Properties.—Internally, blue-
ts as an emetic and a tonic; and
ly, as a stimulant, astringent, and
ic. As an emetic, in cases of
e poisons, bluestone is a drug of
efficacy and despatch, generally
ithin a few minutes from the time
g, the dose being from 5 to 15
lissolved in warm water. As a
cases of convalescence from fever,
a, general debility, St. Vitus' dance,
ysis, bluestone, either alone or in
tion with other tonics, is a drug
reliable advantage, and may be
doses ranging from one-fourth of
to 1¼ grains three times a day.
xternally is far greater and more
;than internally, and as a collyrium,
for the eyes, in certain conditions
rgan, in the proportion of a grain
unce of common or rose water, is
ly serviceable, acting as a gentle
eficial stimulant. As a lotion or
› indolent ulcers, or those of a
character, in the proportion of
o 5 grains to the ounce of water,
leansing and corrective appli-
o warts, diseased formations, or
nic sores, either scattered over as
r, or the crystal rubbed on the
is salt will be found of singular
See COPPERAS.

.—Professionally called *Furun-*
This, though a disease of the skin,
lly be called a cutaneous affection,
eat of it is always in the true skin
ular tissue. This painful disease
rcumscribed, hard, inflammatory
, of a deep red colour from the
ceedingly painful, and almost
erminating, after a tedious process,
ration. *A boil generally com*mences with a small red pimple, uncommonly tender and angry-looking, which, after a time, enlarges, having a white point, and a broad, hard, well-defined base spreading under the skin. As the swelling advances, the point or apex sinks, till the whole assumes the form of a flat, elevated cake, with a puckered centre. The suppuration is always slow, and never perfect, for the discharge, or pus, is tinged or mixed with blood and fibres of the cellular tissue.

CAUSES.—Boils nearly always arise from constitutional causes, and are, in reality, efforts of nature to throw off, or relieve the body of, some impurity, that, retained in the system, would be prejudicial to health; hence they have been popularly called healthy, as after them the system usually feels lighter and better. Boils generally occur in full-bodied, free-living persons, in robust health and the prime of life, though they occasionally take place in weak, emaciated individuals. The parts most liable to boils are the neck, between the shoulders, the fleshy part of the arm and the hip, or upper part of the thigh, rendering the sitting posture almost impossible.

TREATMENT.—As boils seldom come singly, and a crop or succession forms either in the same neighbourhood or other parts, some practitioners endeavour to discuss or dissipate them either by applying a soft extract of opium, the extract of lead, or a preparation of honey and diluted sulphuric acid; but almost always this is not only a loss of time, but a source of irritation and suffering to the patient, as the natural intention of the swelling is to proceed to suppuration. To facilitate this object, the most prudent practice is, from the first, to encourage the suppuration by every available means, and hot emollient poultices are the best possible applications; and of these, such articles as retain the heat longest are the best. Linseed-meal is generally considered the most suitable article for a poultice, and this, with barley-meal, or bran, may be steadily employed, using one or the other as a change, for the poultice must be continued for some considerable time before the boil will be far enough advanced to be interfered with. As soon as the upper portion becomes soft, showing that suppuration has commenced, an incision is to be made through the skin into the hard mass below, all the collected matter pressed out, and the poulticing continued till the *entire core,* as it is called, has been discharged. To facilitate this, the opening in the first instance must be large, and, to be thoroughly effectual, should be crucial, or in the form of a cross. To expedite the expulsion of the core, it is sometimes necessary to wash the sore with a solution of bluestone, or touch the edges with nitric acid or lunar caustic. When the whole of the hardened tissue has been thrown off, and the cavity cleaned by fomentation or poultice, a piece of lint is to be laid over the part, which will soon close up and heal. When the healing process, however, is slow, a weak solution of bluestone may be used to stimulate the granulating surface, and the dry lint resumed.

It is during the cure of the abscess that medicine should be given; and as such painful visitors as boils generally proceed from a disordered state of the stomach or bowels, the course should begin by taking a couple of compound colocynth pills, followed, if necessary, by a black draught; and the day after, the pills and mixture prescribed below. Take of—

Blue pill . . .	1 scruple.
Compound rhubarb pill	1 scruple.
Extract of henbane .	1 scruple.
Powdered colombo . .	10 grains.

Mix, and divide into 12 pills; one to be taken three times a day. Take of—

Infusion of quassia .	6 ounces.
Diluted nitric acid . .	20 drops.

Mix: two tablespoonfuls to be taken every six hours. A decoction of dandelion or sarsaparilla may be occasionally substituted for the quassia mixture, with a change of food and a full diet in all stages of this disease, and especially in the convalescent period. The warm bath, with friction, will be found eminently serviceable. See CARBUNCLE.

BOLE.—An argillaceous earth, used externally as a dusting powder for infants.

BOLE ARMENIAN.—A red argillaceous earth, possessing astringent and styptic properties, and largely used by dentists as a tooth-powder: it is particularly serviceable in all scorbutic affections of the gums, and especially in that soft, spongy state of them common to scurvy of the mouth. See TOOTH-POWDER.

BOLETUS IGNARIUS.—The agaric the boletus is also a species of Mushroom, which see.

BOLUS.—A Latin word, signifying a piece, a bit, a mouthful, a large pill; a form of giving medicine very much in vogue fifty years ago, but now entirely obsolete.

BOMBUS.—A ringing sound in the ears, from a Latin word signifying a buzz, a hum; a word used to express what physicians call *tinnitus aurium*.

BONE.—*Os*, or *osteon*. Bones are hard, insensible, organized parts of the body; of a white colour in youth and mid-age, but dark and greasy in advanced life; of a spongy, compact texture, forming the solid framework of most animal bodies, serving as supports and protection to other organs, and affording attachment to the muscles, which act as levers to the body, and give motion and locomotion to the frame. Bones are highly organized, and are composed of a fine porous membrane called cellular tissue, the cells or meshes of which are filled up with an osseous or bony deposit, each bone taking its shape from the duty it has to perform.

All bones are hollow, and consist of two plates, the space between being filled up with a kind of honeycomb arrangement, the cells of which are filled with a fine semi-fluid oil, that serves to give them lightness and strength, and tends to preserve them from fracture, to which they would else be constantly liable but for such a provision.

Bones are divided into the *round* and the *flat*; the round, such as those of the leg and the arm, are long, cylindrical, hollow tubes, filled with an opaque, semi-fluid oil, called marrow, which, while nourishing the bone, imparts strength and lightness to it. The flat bones, like the breast-bone, those of the shoulder, hip, and bones of the skull, consist of two plates, with an intermediate cancellated structure.

All bones are covered with a close-fitting fibrous membrance, called *periosteum*, through which they are liberally supplied with arteries, veins, lymphatics, and nerves.

Bone consists of cartilage, gelatine, neutral phosphate of lime, carbonate of lime, fluate of lime, phosphate of magnesia, soda, and chloride of sodium.

The skeleton of the human body consists of 248 bones, divided into two equal sets, with the exception of the spinal column, which is composed of 26 separate bones. See SKELETON, and VERTEBRÆ.

Bones are subject to diseases like the soft parts of the body, particularly to inflammation, ulceration, caries, exfoliation, and death, or Necrosis, which see.

BORAX.—*Boras sodæ*, or the biborate of soda, a saline compound, composed of boracic acid and soda, found native in Thibet, Persia, and South America. A white, transparent crystal of six-sided prisms, terminating in three-sided or six-sided pyramids. Borax is invaluable as a flux in the arts, and extensively used as a solder in gold and silver, and also used in medicine, both as a lotion and *linctus*, or confection for thrush, and any soft and painful affection of the tongue, mouth, and gums. The borax, dissolved in water, and used either as a wash or gargle for sore mouths, affords considerable relief. The usual form of using the borax for children in thrush, is to mix the powdered salt with honey, and put a small quantity into the child's mouth, allowing it to melt and diffuse: this is called a *Linctus*, which see. Or else a solution of the salt in rose-water is used, with a little lint tied to a stick like a mop, with which the lotion is freely applied to the child's mouth. See THRUSH. It is also used as a cosmetic wash to beautify the skin, and as a gargle for sore throats. See GARGLE, and COSMETIC. Borax is refrigerant and diuretic, and useful both in salivation and dropsy.

BOUGIE.—An instrument, either made of a flexible, elastic, waxy material, capable of being bent into any shape required, or manufactured of polished iron or steel, and formed into a curve. Bougies are made of many sizes, gradually enlarging in calibre, and numbered from a definite figure, upward. The object of this instrument is to overcome a contraction or stricture in one or other of the great passages, as the œsophagus or gullet, the urethra, or the rectum. For the mode of introducing the bougie, see STRICTURE. The only general precaution necessary to mention is, when the metallic one is used, to warm it before being employed, and in both cases to oil the instrument first.

BOWELS, INFLAMMATION OF.—*Enteritis.* This formidable disease, which is an acute inflammation of the peritoneal coat, or investing lining, of the intestines and all the abdominal viscera, involving also the muscular coat of the bowels themselves, is one of the most formidable of all the inflammations of the body, and demands the most immediate and energetic mode of treatment.

SYMPTOMS.—These begin with sharp pains in the abdomen, with a darting, twisting succession of pains round the navel, all greatly increased by pressure; at the same time there is great tension or tightness of the integuments.

The patient is afraid to move his head or arms, or any part *of the body, from the* fear of increasing his sufferings; the legs are drawn up and bent, to afford relief; at the same time there is an obstinate constipation of the bowels, with sickness and vomiting—generally of bile, but if the inflammatory action is very low, occasionally of crude, and even feculent matter,—and the pulse, at first quick and sharp, becomes hard, frequent, and contracted. The strength seems exhausted, and the water is high-coloured and scanty.

When about to prove fatal, the pulse sinks and becomes small and weak, the features are pale and shrunk, the extremities grow cold, a clammy sweat bedews the body, and a violent hiccough precedes the death.

When a favourable turn may be expected, the pulse rises, the bowels act freely, the pain and tension subside, and a large quantity of urine is freely voided.

This disease usually terminates in resolution, ulceration, or gangrene. It is easily distinguished from colic by being attended with fever, by the state of the pulse, and by the pain being increased by pressure, whereas in colic it is relieved by it.

TREATMENT.—In this, the first object is to allay the inflammatory action, and then to keep the bowels open. The first of these intentions must be effected by bleeding from the arm, in quantity proportionate to the age of the patient and urgency of the symptoms, by the application of from nine to eighteen leeches round the navel, by placing the patient in a hot bath for five or seven minutes, and by the use of repeated fomentations of hot camomile tea over the abdomen, and a suppository of five grains of opium placed in the rectum. One of the following powders is then to be given every two hours for *four times* in succession. Take of—

Calomel	18 grains.
Powdered opium . .	6 grains.

Mix minutely, and divide into six powders.

Two hours after the last powder, an ounce and a half—if to an adult man—of castor oil is to be given in a little peppermint water. Should the bowels not act within an hour after, a warm injection of a quart of thin gruel, with castor oil, must be thrown up the bowels by means of an enema syringe, and in half an hour after, a drop of croton oil placed on the tongue, and the same kind of injection repeated. When the bowels begin to act freely the symptoms abate, and the patient is to be given warm mucilaginous drinks, and the following mixture. Take of—

Solution of acetate of ammonia	2 ounces.
Camphor water . . .	3 ounces.
Ipecacuanha wine . .	3 drachms.
Tincture of opium . .	1 drachm.
Sweet spirits of nitre .	2 drachms.

Mix, and give two tablespoonfuls every four hours.

When the vomiting is very severe and continued, there is fear of an intussusception; in which case, from one to three ounces of quicksilver must be swallowed, in the hope of overcoming the obstruction. See INTUSSUSCEPTION, and GASTRITIS.

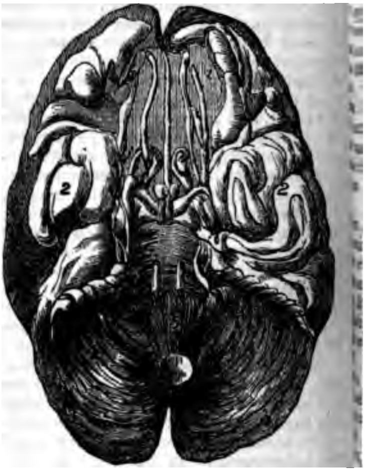
BOWELS, OBSTRUCTION OF. See CONSTIPATION.

BRACHIUM.—The arm; from whence we obtain the word brachial, as the brachial artery, or nerve, the name of the chief artery and nerve of the superior extremity. The brachial artery is a continuation of the axillary artery, and terminates in the radial and ulnar arteries.

BRAIN, THE.—This important organ, the seat of sensation, thought, and intelligence, and contained in the cavity formed by the bones comprising the case of the skull, has been described by modern phrenologists as being a large flat cake, which, if carefully unfolded and spread out, would cover a circular area of several feet in diameter. The brain so expanded is folded and doubled up in the most admirable and wonderful manner, to enable it to adapt itself to the narrow, oval cavity of the *cranium* that receives it; these doublings or folds being the convolutions, as they are called, which impart those inequalities to the vault of the skull-cap from which the science of phrenology has derived its external symbols.

Anatomically, the brain consists of two parts, the external and internal. The external or outer portion is termed the bark, or *cineritious* part, from its ashy grey colour; it is also called the glandular, or secretory, because it was supposed to possess some of the secreting properties of a gland. This portion is composed of a fine cellular membrane, through which a congeries of extremely minute bloodvessels circulate freely. The internal portion, the largest and the most consistent part of the brain, is called the *medullary* portion, so named from its white marrowy appearance, and consists of bundles of minute fibres interlaced together. Both these portions are intimately united in the centre of the mass, or, as it is called, in the *meisual line, the* fibres of the right side passing to *the left, and vice versa:* thus each side of the brain is a reduplication of the other. The brain is divided into three parts—the *cerebrum*, or brain proper; the *cerebellum*, or lesser brain; and the *medulla oblongata*, or commencement of the spinal marrow.

The cerebrum, or brain proper, is situated at the upper and anterior part of the skull, and is much the largest portion of the whole mass. It is divided into two halves, called *hemispheres*, each hemisphere being subdivided, by deep fissures called *sulci*, into three *lobes*, named, from their situation, the anterior, middle, and posterior lobes. The cerebellum, or smaller brain, is simply divided into two parts—the right and left hemispheres. This portion is situated at the back of the head, or *occiput*, and differs materially in structure from the larger brain, being composed of flattened layers, or *laminæ*. The medulla oblongata is somewhat of a funnel shape, and seems like a continuous process of the latter part of the brain, and passes out of the skull to descend along the tube of the spinal column. See MEDULLA OBLONGATA.



UNDER VIEW OF THE BRAIN.

No. 1, 1. Anterior Lobes of the Cerebrum. 2, 2. Middle Lobes. 3, 3. Posterior Lobes. 4, 4. Right and Left Hemispheres of the Cerebellum. 5. Commencement of the Medulla Oblongata.

Besides the external case of the skull, the brain is enclosed in *three* internal investures or membranes, two of them by the ancients, who believed that ave birth to and supported all rvous mass within the head, the s. Thus the first, a strong fibrous , is named *dura mater*, or hard , because firm and resistent, lining de of the skull and top of the brain, ding down long processes between hemispheres and convolutions in ogous manner to the tough mem- ound lining the inner shell of a , to which fruit the brain bears a general resemblance. The second d the *pia mater*, or kind mother, it dips into every fold and convo- f the brain, and is a fine delicate ane, covered in every part with ork of bloodvessels, and is the by which nourishment is carried substance of the brain. The third named the *arachnoid membrane*, s resemblance to a spider's web. per uses and order of these invest- will be given elsewhere.

een the folds and doublings of the tions of the brain there are several , or open spaces and elevations, ave received from different anato- ames, according to their shape or ch as the Ventricles, Fornix, Hip- i, &c., which see.

human brain is larger in proportion at of any other animal, and weighs, dult man, about three pounds, and female two pounds twelve ounces; re are many exceptions to both

s been discovered that the intelli- f an animal depends much on the ities or convolutions of the brain; r the animal sinks in the scale of , the *smoother* becomes the f the brain. For the arteries and this organ, see CIRCULATION OF AIN.

rain is subject to several diseases ny accidents: for the former, see MATION OF THE BRAIN AND RANES, MANIA; and for the latter, ESSION, CONCUSSION, RUPTURE,

AIN, SOFTENING OF, or *Ramol- nt*.—This is a chronic affection, ing from inflammation of the sub- of the brain, and can only be ex- l after the primary cause. See MMATION OF THE BRAIN.

AN.—The husk or shell of wheat, as it contains a considerable amount farinaceous property of the grain, d by the Scotch *to make a subacid*, gelatinous, and very nutritious food, extremely serviceable as a diet to the convalescent patient in fevers, called Sowans, which see. Bran is only used medically as a surgical agent in poultices, for which it is very well adapted; a few handfuls being sewn in a bag, and the whole dipped into hot water, makes a clean, economical, and very useful poultice. See POULTICE.

BRANDY.—A well-known powerfu spirit, obtained by distillation from wine, and is, in combination, often used in medicine as a diffusible stimulant, either with water, or with ammonia, ether, and opium. Brandy consists of alcohol and essential oil and water. See SPIRITS, and DRINKS.

BRANKS.—A Scotch term, signifying a swelling of the glands of the neck in children. See MUMPS. Also the name of a coarse kind of buckwheat.

BREAD.—The flour or meal of any grain, prepared with or without leaven or fermentation, and made into a dough, and baked or toasted in different shaped masses, is denominated bread. The active principle of bread consists of its farina, or flour; which, in turn, owes its nutrient properties to certain organic principles residing in the flour, such as sugar, gum, starch, and gluten, which last is the most important substance, wheaten flour yielding a larger quantity of gluten than that of any other grain. See FOODS, FLESH-FORMING, &c.

BREAD-FRUIT TREE.—This remarkable and invaluable tree grows wild in the Ladrone, Otaheite, and other Polynesian islands, and usually attains the height of a small oak or apple tree. The bread-fruit belongs botanically to the *Artocarpus incisa*. The fruit is of a spherical form, and grows on the boughs, like apples, but as large as a small melon, or a penny loaf. It has a reticulated surface, and is covered with a thick, tough skin, or rind, with a small core, or central pith. The part used for food is the pericarp, or fleshy portion between the skin and core; it is perfectly white, and in general appearance resembles the crumb of new bread. It is usually toasted before being eaten, and in flavour greatly resembles bread made with potatoes or artichokes: it is remarkably nutritious and easy of digestion.

The only drawback to the bread-fruit is that it must be eaten when new, or freshly plucked; for if gathered above twenty-four hours, it becomes dry and husky. The fruit is in season for eight months of the year, and during its continuance the natives eat nothing else in the shape of bread. See Food.

THE BREAD-FRUIT TREE.

BREAKFAST.—This, being the most important meal in the twenty-four hours to persons in health, is even of greater consequence to the invalid: for upon the amount of food taken into the stomach at this meal, the greatest fatigue and most active duties of the day are transacted; and if the brain be not healthily stimulated, by a sufficiency of aliment at that time, it is impossible for any one long to transact his daily business with credit to himself or advantage to others. The breakfast, both in health and sickness, should be always punctually taken, and as much solid food consumed at it as can possibly be disposed of.

To enable a person to take as much solid aliment as is consistent with a due regard to the health of the individual and the powers of the stomach, a boiled or poached egg, a piece of broiled bacon, ham, or a bloater, should be taken with the meal, so as to insure the eating of a considerable amount of bread, and to give the stomach a natural stimulant by the bulk of the aliment taken; the proper time at *which the breakfast* should take place *must depend upon the* occupation or circumstances of the person most interested; but, to be beneficial, it should not be sooner than an hour after rising. When, however, this cannot be effected, and two or three hours must elapse between the rising from bed and the breakfast, a cup of milk and a biscuit, or a crust of bread, ought to be taken before performing any business, to give the stomach, which is at that time particularly active, something on which to exercise its digestive function; for if left empty for any length of time, it may become torpid, and when the period arrives, either refuse to act or act imperfectly, undoing the great benefit to be expected from a good breakfast.

BREAST.—The breasts, as confined to woman, are those soft and delicate protuberances situated on the upper and anterior part of the chest, and consisting of the nipple and its dark red areola, with the integuments common to the rest of the body, and the mammary glands that lie immediately beneath the skin, surrounded by cellular tissue; these, with the usual arteries, veins, lymphatics, and nerves, anatomically constitute the female breasts or *mammæ*. This is not the place to discuss the intimate and remarkable sympathy existing between the uterus and other organs and the mammæ: that subject will be entered upon hereafter. The present article is confined entirely to the accidents to which the breasts are liable during the period of suckling.

The most frequent affection to which these organs are liable at such a time is an inflammation running on to suppuration, inducing what is called a *broken breast*.

Causes.—These are extremely numerous, and by no means always satisfactory. The application of cold or wet cloths to the part; damp feet; mental anxiety; an excessive flow of milk, and consequent distention of the organs; a retracted nipple, and injudicious efforts made to draw it out by the mouth or pump; undue pressure; and sometimes an accidental blow, may severally cause it. Such accidents usually occur within the first six weeks after the birth of the child, though often taking place within the first week: they may happen at any period of maternity, either with the first child or the last.

Symptoms. — These commence with heat and restlessness; pain in the breasts, which feel hard, lumpy, and hot; shooting or darting pains running from the breast to the arm-pits; at the same time the pulse is excited and febrile, and a degree of fever manifests itself in the system, with headache, pains in the back, and a dull throbbing sensation experienced in the organ itself, accompanied by hectic symptoms in the patient, — all plainly showing the tendency to suppuration.

Treatment.—The first efforts of the surgeon should be bent to avert the possibility of an abscess forming; but if, after a reasonable time, it becomes evident this cannot be effected, suppuration must be encouraged by every available means. If the breasts are very full, and the child unable to reduce them sufficiently, they should be emptied or reduced as soon as possible, either by the mouth of the nurse, or, if they can be procured, what is much better, by two or three blind puppies. If neither can be obtained, the breast-pump must be employed,—the only objection being that the pressure caused by the instrument, while the breast is in such an irritable state, may and does frequently cause the suppuration which the remedies are meant to avert.

Concurrent with this, the bowels must be acted on by small doses of compound rhubarb pill—3 grains every four hours,—with a teaspoonful of Epsom salts and a little carbonate of magnesia in peppermint water every six hours, till they act on the bowels. Still further to reduce the heat and fulness of the breast, the following evaporating embrocation is to be applied.

Take of—

Camphorated oil . . .	1 ounce.
Sulphuric ether . . .	3 drachms.

Mix: a small quantity to be rubbed over the breast, and allowed to evaporate, repeating the application every fifteen minutes. If, after two or three hours' steady use of this remedy, there seems no adequate reduction in the size of the breast, the organ is to be rubbed either with plain camphorated oil or lard, the palm of a soft hand being used for the purpose, the friction being continued for a quarter of an hour at a time. If these effects fail to arrest the size of the breast, or the progress of suppuration, hot fomentations are to be applied constantly, by means of flannels, wrung out of hot water, placed on the part, and covered with a piece of oilskin to retain the heat. As soon as the abscess is fit to open, an incision must be made in the lower part of the swelling, so as to insure the perfect escape of the matter, and the fomentation continued — the aperture being *kept from* closing by the insertion of a bit of lint. During the progress of the cure the patient's strength must be supported by a liberal diet, and the occasional use of wine, and even bark or quinine, if necessary. For other affections of this organ, see Suckling, Cancer, Nipple.

BREATH, IMPURE.—There are few things more offensive than a foul or fœtid breath, not only as a source of annoyance to the person himself, but a positive nuisance to all who have the misfortune to approach him. Impure breath, except in cases of illness, and when the patient is under a course of mercury, proceeds from two causes—a neglected state of the stomach and bowels, or from decayed teeth and an unclean mouth; and as in either case the remedy is easy, it must be owing to an innate disregard for others' comfort, and neglect of his own, that any person allows so noxious an offence to continue. When the cause proceeds from the bowels, two or three colocynth, or compound rhubarb pills, taken once every six hours, and a black draught, or half an ounce of Epsom salts afterwards, will almost always remove it; while, if the mouth or teeth are the cause, a weak solution of the chloride of lime, used twice a day as a wash for the mouth, rubbing the gums and teeth after each time with a dry cloth, will soon remove all cause of complaint; or, what is still better, the daily employment of a tooth-brush and the following dentifrice.

Take of—

Powdered charcoal . .	½ ounce.
Cuttle-fish	2 drachms.
Myrrh	1 drachm.

Used as a tooth-powder night and morning with warm water.

BRIGHT'S DISEASE.—A peculiar disease of the kidneys, so named from Dr. Bright, the first to draw attention to the existence of this singular affection, the chief characteristic of which is the presence of a greater or less amount of serum separated from the blood, and found in the urine voided from the bladder.

Symptoms.—Pain in the back and loins, at first slight and occasional, but becoming heavy, dull, and settled, accompanied with restlessness and fever, and the usual functional disturbance in the other organs; loss of appetite, hectic flushes, and general disturbance. These symptoms are succeeded by enlargement in the loins, œdema, or swelling of the face and extremities, and finally a state of general dropsy. Should these *symptoms fail* to point out the disease, heat applied to the urine will at once indicate its character; for the serum will become coagulated, and, according to the amount present, either the whole will be rendered solid, or masses of *coagulum* will be seen floating about the water.

The CAUSES of this disease are either a scrofulous condition of the system, an intemperate habit, or the long indulgence in a course of alcoholic liquors, or dram-drinking.

TREATMENT.—A warm bath is the first remedial agent to be employed, which is to be followed by friction over the loins with weak mercurial ointment, containing a drachm of camphor to the ounce; or, if the pain be severe, cupping, or the application of a dozen leeches to the loins should be adopted; at the same time giving one of the following powders every six hours, and a pill, containing 1½ grains of solid opium, at bedtime. Take of—

Sulphate of potass . .	½ drachm.
Powdered jalap . . .	1 drachm.
Powdered nitre . . .	1 scruple.
Calomel	18 grains.

Mix thoroughly, and divide into six powders. See KIDNEYS.

BRIMSTONE.—A mineral substance found native in most parts of the world, either pure or in combination with metals, forming ores. The word brimstone is generally confined to that form of sulphur vended in cylindrical rolls, and vulgarly known as stone brimstone. See SULPHUR.

BRISTOL HOT SPRINGS.—These mineral springs have been for centuries celebrated for their medicinal properties, and are greatly recommended in all cases of obstruction in the bowels, and in pulmonary cases. See MINERAL WATERS.

BROCCOLI.—The *Brassica Italica.* This well-known species of cabbage, a variety of the cauliflower, is an extremely light and nutritious vegetable, and when young and tender—which, if quickly grown, it is sure to be—may be taken with simple roast or boiled meat by any invalid. Broccoli is only liable to be hurtful when taken with melted butter. See FOOD.

BROMINE, OR BROMIUM. — An undecomposed substance of a very volatile nature, of an offensive smell, and suffocating odour, resembling a mixture of chlorine and iodine. With oxygen it forms *bromic acid,* and with hydrogen *hydrobromic acid.*

Bromine is extracted from seaweed, [illegible] *and certain mineral* waters, and, in the form of bromide of potassium and magnesium, has been employed in medicine in diseases of the heart and spleen, scrofulous tumours, and other affections for which burnt sponge and iodine have been recommended. It is a violent poison.

BRONCHIA, OR BRONCHI.—The bronchial tubes; though strictly meaning the bifurcations, or the two tubes into which the trachea or windpipe splits on entering the chest. The word bronchia, or air passages, signifies every division, subdivision, and minute ramification into which the division of the trachea separates till opening into the air-cells in the substance of the lungs. The function of the bronchia is to convey the air received by the mouth and nostrils and the windpipe to every part of the three lobes of the lungs, and carry it to the bronchial cells, where it mingles with the impure blood, converting it into arterial blood, and changing it to a bright scarlet colour. See cut at page 60, and LUNGS, and RESPIRATION.

BRONCHIAL GLANDS. — Numerous small, dark-coloured glands, situated on each side of the bronchial tubes in their course from the trachea to the lungs.

BRONCHITIS.—There are few diseases affecting the respiratory organs more prevalent in this country, or more serious, than that form of inflammatory action attacking the air-passages known as the bronchial tubes, or any form of disease calling for more prompt or energetic action.

Bronchitis is divided into three kinds—the acute, the chronic, and the sub-acute, or the bronchitis of old age.

ACUTE BRONCHITIS.—This form of the disease comes on with all the symptoms of a common cold or severe influenza—running at the nose, hoarseness, shivering, with feverish flushes and difficulty of breathing; the respiration becoming more laborious as the disease advances, attended with a peculiar sense of fulness and roughness in the windpipe, tightness over the region of the heart, accompanied by a short, dry cough, with a scanty expectoration, which, by degrees, generally after a lapse of twelve hours, becomes more copious, and of a white, glairy appearance, like the white of eggs, but which in time is streaked with blood, and of a muco-purulent character, or resembling a mixture of mucus and matter. The presence of this expectoration produces a wheezing, rattling noise as the patient breathes; while in consequence of the blood not being freely mixed with the oxygen of the air, the lips and cheeks assume an ashy, dusky appearance. The cough, difficulty of breathing, and anxiety all become greatly increased towards night, when the fever also assumes an increase of all its symptoms. In favourable cases the symptoms begin to decline after the fourth day, and there is a gradual amendment of all the distressing characters. The pulse at first is quick and hard, but becomes full and soft as the disease advances, but so compressible that the least force of the finger entirely extinguishes it till the pressure is removed. Great debility attends the disease from the commencement, with pain in the head, giddiness, and sometimes delirium.

Treatment.—When the patient is young, and of a full, robust constitution, and the disease is taken early, six or eight ounces of blood should be extracted at once from the arm, an aperient of 15 grains of jalap, and 5 grains of calomel, given immediately afterwards, the patient placed in a warm bath for seven or ten minutes, and the system, as soon as possible, brought under the influence of tartar emetic, by giving the following mixture every hour, till nauseating symptoms are produced. Take of—

Tartrate of antimony .	6 grains.
Powdered nitre . . .	½ drachm.
Camphor water . . .	6 ounces.
Tincture of colombo .	2 drachms.

Mix: two tablespoonfuls every hour, or one tablespoonful every half-hour, till nausea or sickness is produced. At the same time, a large, hot bran poultice should be laid over the chest, and repeated every hour, or when cold, and the patient allowed to inhale the hot fumes from vinegar and water every now and then, and every second hour take one of the subjoined pills. Take of—

Compound squill pill .	½ drachm.
Powdered camphor . .	12 grains.
Extract of hemlock . .	1 scruple.

Mix, and divide into twelve pills, one of which is to be taken every two or three hours. When the bleeding is inadmissible, the practice should commence with the warm bath, and be followed by an emetic composed of 10 grains of ipecacuanha, and 1 grain of tartrate of antimony; and after the subsidence of the vomiting, a blister, about seven inches long by three wide, is to be applied over the centre of the chest, and one of the above pills *taken every* four hours, and two tablespoonfuls of the mixture every two hours. When the blister has risen, and been cut, a large bran poultice, such as has already been ordered, is to be laid over the whole chest, and repeated as often as it becomes cold, the blistered part at bedtime being covered with violet powder, a piece of linen placed over this, and a hot, dry bran poultice laid over all, and secured for the night, bottles of hot water being placed at the patient's feet. For the thirst that attends this disease, linseed tea, with a scruple of nitre to the quart, or barley water, is to be taken as a beverage as often as it is deemed necessary. If the symptoms do not yield to these remedies, or a sufficient degree of nausea is not produced by the antimonial mixture, one of the annexed powders is to be given every two or three hours. Take of—

Powdered ipecacuanha	24 grains.
Powdered nitre . . .	20 grains.

Mix, and divide into six powders; and one of the following every four or six hours. Take of—

Powdered lump sugar .	1 drachm.
Tartar emetic . . .	4 grains.
Calomel	24 grains.

Mix, and divide into six powders.

When the expectoration begins to change its character, and becomes thick and ropy, and of a greenish colour, the expectorant mixture ordered below may be given with advantage. Take of—

Gum-ammoniacum .	2 drachms.
Carbonate of ammonia	½ drachm.
Water	6 ounces.

Rub down the ammoniacum till a smooth, white, milky mixture is made (see AMMONIACUM); then add—

Syrup of squills . . .	3 drachms.
Syrup of tolu	3 drachms.
Spirits of sweet nitre .	2 drachms.
Paregoric	½ ounce.

Mix, and take a tablespoonful every hour; and if there be much restlessness and want of sleep, add to the last dose, at bedtime, 25 drops of laudanum.

During the treatment the patient is to be preserved as much as possible in one uniform temperature; his bowels kept open by a mild aperient, and the diet light, low, and farinaceous.

CHRONIC BRONCHITIS.—This form of the disease is either the continuation of the acute, all the characteristics having assumed a less urgent, but more persistent, character; or it returns every winter with increased severity, enduring for several *weeks, with* all the symptoms of a con-

[illegible] cold. When the mucous [illegible] the expectoration [illegible], and the breathing hard and difficult. The disease is frequently called [illegible] Asthma, which see, in which [illegible] countenance. The pulse is always small and feeble, and there is great [illegible]

The symptoms [illegible] disease are nearly the same as in the acute, the [illegible] being more fibrous, discoloured, and copious, all the symptoms being greatly aggravated as evening approaches, [illegible] with fever and nocturnal [illegible]

[illegible] When the disease comes [illegible] urgent symptoms, and there [illegible] mucus in the air-passages, as indicated by the rattling sound made by the air passing through, it may be necessary to give such an emetic as has been already [illegible] in the acute form, or one composed of half an ounce of ipecacuanha, and the same of antimonial wine, and to apply a blister to the chest; but, in general, a hot bran poultice over the part, repeated every two hours, and the rubbing the chest night and morning with an embrocation composed of 1 ounce of camphorated oil, with 2 drachms of oil of amber, and 2 drachms of spirits of hartshorn, will be found sufficient, which, with the pills and mixture prescribed in the acute form, will be found to combine all the treatment generally called for, assisted by such diet and occasional stimulants as the season of the year, or the patient's debility, may call for. Stramonium, lobelia inflata, turpentine, chlorine, iodine, colchicum, tar, and many other articles, either to be smoked, or their fumes inhaled, as in asthma, have been strongly recommended in chronic bronchitis, and occasionally they afford considerable benefit. The spring months, and during the continuance of easterly winds, are the periods when bronchial affections are most prevalent and fatal, and the seasons when the body should be carefully fortified by flannel next the skin, and good warm clothing.

SUB-ACUTE, OR THE CATARRHAL BRONCHITIS OF OLD AGE.—The chief *symptoms* of this form of the disease are, difficulty of breathing, cough, an abundance of mucous expectoration, drowsiness, debility, wheezing, with anxiety of countenance, and cold extremities, the patient frequently expiring from the want of strength to expel the mucus from the passages.

Treatment.—*Hot* applications to the chest and feet, the use of the stimulating embrocation advised in chronic bronchitis, and the following mixture. Take of—

Carbonate of ammonia	1 drachm.
Dover's powder . . .	2 scruples.
Camphor water . . .	6 ounces.
Tincture of squills . .	1 drachm.
Spirits of sulphuric ether	1 drachm.

Mix: one tablespoonful to be taken every one or two hours. The bowels are to be gently acted on by a compound rhubarb pill, or a pill taken every day composed of equal parts of rhubarb and assafœtida pills, and by a plain but nutritious diet.

BRONCHOCELE.—The surgical name for a diseased enlargement of the thyroid gland; a gland lying across the windpipe, and which in the unborn child is large, but after birth diminishes, and, unless diseased, becomes, in a measure, rudimentary. A large swelling of the throat, called the Derbyshire neck, or goitre. See THYROID GLAND, and GOITRE.

BRONCHOTOMY.—A surgical operation, which consists in opening the larynx or trachea, for the purpose of removing foreign bodies when lodged in those organs, and sometimes to enable the patient to breathe, when the passage is blocked up by a false or adventitious membrane, as in croup. See TRACHEOTOMY.

BROOM.—This well-known plant, growing on all the wastes and commons in England, the *Planta genista* of the botanists, or the *Spartium scoparium* of the Pharmacopœia, has been long famous among the peasantry for its purgative and diuretic properties. It is, however, only for its latter efficacy that it is now used in medicine, its rank cathartic properties rendering it too violent for modern practice.

The tops made into a decoction, in the proportion of an ounce to a pint and a half of water, either alone or in combination with nitre or dandelion, taken in doses of a wineglassful every six hours, is a most valuable remedy in all cases of dropsy, especially in dropsy of the belly. See DROPSY.

BRUCIA, OR BRUCINE.—A vegetable alkaloid extracted from the bark of the false angustura bark, and found in the strychnos nux vomica. See STRYCHNIA. It is a violent poison, and seldom used in medicine.

BRUISES.—These injuries, like blows, are only serious when they occur over joints or vital organs, or are very severe.

they are followed by much swell-
ain, and discoloration, the part
e dressed with hot fomentations of
ile tea, or decoctions of poppy
hemlock, tansy, or other anodyne
Should the injury, however, be
it will be necessary, in the first
to apply leeches before using the
ation; afterwards encourage the
g with flannels and warm water,
ally apply the herbaceous fomenta-
See Blows.

all cases of ordinary bruises, where
in is abraded, if a square piece of
ubled to the size of the part, and
thoroughly in the extract of lead,
on the bruise, and a warm bran
e wrung dry is placed above it, the
will generally heal in a few hours
t any further application; though,
e cases, it may be necessary to
both the extract of lead and the
e.

UIT. — A peculiar sound. See
OSCOPE.

YONY, WILD, OR WILD VINE.
mmon wild plant, to be found in
lges and roadsides, and which, on
t of its powerful action on the liver
wels, was formerly held in great
as a remedy for the falling sickness,
sis, and other serious diseases of the
nd heart. The wild bryony is now
y obsolete in the practice of physic.

BO.—A tumour in the groin, or a
g of the glands situated in the
(*axilla*), or among those in the
inguen), and generally caused from
sorption of irritating matter, such
ereal or other specific poisons.
oes are either constitutional or local.
first instance they may occur in
rt of the body, and in any number,—
the disease known as the plague,
he bubo becomes a symptom of the
; or they occur locally, from irrita-
plied to some part in the neighbour-
-as in the armpit from a prick in the
or hand during dissection, and in
in from a cause already hinted at.
are, again, sympathetic, and arise
y from over-exertion, or an injury
l to the glands in some remote part,
connection with the one that forms
elling. Thus, long standing, or a
ing journey, will cause a bubo in
roin to rise in a few hours. In
uence of their hardness and slow
ration, buboes are generally ex-
ly painful, and cause considerable
renience.

Treatment.—The first object is to discuss the tumour, which sometimes is as large as a small egg. This is to be effected by the employment of cooling purgative medicines, and by the application of leeches and the following cold lotion, which is to be applied frequently on pledgets of lint, or a large cloth well wetted with the lotion. Take of—

Sal ammoniac . . .	½ ounce.
Powdered nitre . . .	1 drachm.
Camphor water . . .	1 pint.
Vinegar	4 ounces.

Mix. When these means fail to reduce the size of the swelling, and it becomes red and angry, hot poultices of linseed meal, bread, or simple hot water, are to be used, till the abscess has become sufficiently soft to justify its being opened,—which should be done in the ordinary manner of such collections of matter,—and a continuation of the poultice to insure the discharge of all the pus formed.

Sometimes it is necessary to excite the abscess to form healthier matter, and heal; for which purpose a little weak spirits and water should be inserted by a syringe or piece of lint into the sac; or a lotion may be made of sulphate of copper, in the proportion of 4 grains of the bluestone to an ounce of water. See Abscess.

For the more general form of bubo—that condition depending upon a specific virus—see the disease treated in its entirety under the letter V.

BUBON GALBANUM.—The name of the plant from which the medicinal gum-resin, galbanum, is procured. See Galbanum.

BUBONOCELE.—An old medical term for a rupture at the bottom of the belly. See Rupture, Inguinal.

BUCCINATOR. — The name of the principal muscle of each cheek, and so called from *buccina*, the Latin for a trumpet, because it is this muscle that is chiefly used by the trumpeter in sounding his instrument. The buccinator is a broad, flat muscle placed in the centre of the cheek, and is the part protruded in blowing.

BUCHU LEAVES.—This plant, or rather the leaves of it, have been greatly extolled for their sudorific and diuretic properties; and being a native of the Cape of Good Hope, when that colony first came into our possession the properties of the plant were made known by the Dutch to the English physician. The buchu belongs to the Natural order *Rutaceæ*, has a powerful but not unpleasantly aromatic odour, and in appearance bears a strong resemblance to senna leaves.

Medicinally it exercises a direct influence on the mucous membrane of the bladder; and from that fact, and its action on the kidneys, has been largely employed in cases of chronic rheumatism, inflammation of the bladder, and other affections of that organ. The only officinal preparations are the tincture—*tinctura buchi*—and an infusion and a powder of the dried leaves. The dose of the tincture is from 1 to 2 drachms, of the infusion from 1 to 3 tablespoonfuls, and of the powder from 10 grains to half a drachm.

BUCKTHORN.—The *Rhamnus catharticus*, a well-known indigenous shrub, common to this country, belonging to the Natural order *Rhamnaceæ*. The well-known properties of this plant have obtained for it the name of Purging Buckthorn. This property has made it popular in all cases of worms in children, three or four berries being considered sufficient for a child of four years of age, both to act on the bowels and expel the worms. The syrup of the berries is the only preparation kept, and this, though it occasionally gripes, is a very active purgative, in doses of 8 or 10 drachms for an adult, and 4 or 6 for children.

BULIMIA.—Inordinate or voracious appetite, a disease of the stomach and the digestive organs. The amount of food consumed by persons labouring under this ravenous state of appetite is enormous. Ancient history is full of accounts of men and women whose consumption, though beyond all precedent, never seemed to bring satiety. The Emperor Maximus, a man eight feet high, despatched daily for his dinner forty pounds of beef and nineteen bottles of wine, without counting bread and vegetables. In consequence of this immense diet, his frame expanded to such dimensions, that his wife's bracelets served him for rings to his fingers. But even Milo the Cretonian, the gormandizing of the Emperor Claudius, and all other cases recorded of bulimia, sink into insignificance before the achievements of the bloated monster, Vitellius, who ransacked Europe, Asia, and Africa, to find luxuries for his inordinate appetite, every road being covered with couriers, and every sea with ships, stored with dainties for this Cæsar's symposia. He made four immense meals a day, frequently taking an *emetic an* hour before the next, to enable *him to eat more* and enjoy the feast longer. So insatiable was his appetite, that during the pontifical sacrifices, when, as high priest, he officiated, he would frequently snatch the half-heated entrails from the sacred fire, and devour them before the congregated people. His brother, Lucius Vitellius, once gave him a feast, at which there were 2,000 fishes cooked, 7,000 of the most rare and delicious singing birds, besides other varieties from all quarters of the world. Some idea of the enormous gluttony of this emperor may be formed when it is known that in the four months of his reign his table alone cost a sum equal to seven millions sterling. A standing order in this despot's domestic arrangements was that several thousands of pheasants' livers, tongues of fishes, peacocks' brains, and tails of lampreys, should be always kept in stock. See APPETITE, DEPRAVED.

BUNION.—An inflamed and painful swelling of the *bursa mucosa*, or sac containing the oil of the joint, chiefly situated on the inside of the great toe. This disease, if not remedied in time, is certain to lead to a permanent enlargement and disfigurement of the toe. The exciting cause is generally a long-continued pressure from a tight boot or shoe.

TREATMENT.—This should commence with a warm bran poultice, continued for one or two hours, so as to soften the cuticle of the part; a piece of lint, wetted in the extract of lead, is then to be applied, cold, round the toe, and the lint moistened from time to time with more of the extract. In a few hours all inflammation will have subsided, and if care be taken not to repeat the pressure, but use a large boot, the bunion will be cured. If it be preferred, a couple of leeches may be applied, and, after the bleeding, a lotion But in almost every case, the above treatment once or twice repeated will be certai to effect a cure. When the toe ha become enlarged by the thickening of th cartilages, caustic may be rubbed over th part, after the inflammation has been su dued; and when the blackened cuti peels off, the same process may be repeat till absorption has carried off the swellin

A piece of thick buckskin, or agar with a hole cut out for the swollen part come through, and then spread with hesive plaster, should be worn for seve days, to take off all pressure from the when shoes or boots have to be worn.

BURDOCK.—The common burdoc the *Arctium lappa*, is said to posse aperient, diuretic, and diaphoretic pr t is now entirely expelled from l articles of modern practice.

JNDY.—A light French red h, on account of the small per- f alcohol contained in it, has ı recommended in the cure of a light, diffusible stimulus. As ver, apt to excite the pulse and adache, it should never be pre- plethoric constitutions.

JNDY PITCH.—A resin ob- m the species of fir known as pine. It is, however, seldom ure, a common pine resin being h it. Burgundy pitch is only he composition of plasters, in retained on account of its warm, g properties. It is employed in facture of the pitch plaster, *m picis*, and in making the arming plaster—a combination ndy pitch, litharge plaster, and ster.

S.—No species of accident is more witness, or more serious in its ces, than burns, especially when of the clothes catching fire; for nly cause immediate and terrible t produce most serious local in- erwards, often impairing all the ts of life, and too often proving the spot. So thoroughly is the alyzed by the instant terror, that us teaching, no experience, is of l to the victim, who, losing all of mind, rushes wildly into the ing an extra draught by the flight, bling the danger by the fanning f the air.

emale garments are made of less able material, there seems no way ch the present frightful sum of deaths by burning can hope to be l, the foolish fashion of crinoline fearfully added to the yearly list of ty by such accidents. As it seems s to impress on the mind of the in flames the observance of any rules, the fright making them for e delirious, it should be familiarly to all, what steps to adopt in case re suddenly called on to render nce to man or woman in such an ity, though, unfortunately, the re seven to three of women over

moment a person is seen in flames, stander should instantly pull her or her to the ground, whether in a r the street, as the fire on that *part* person on *which they lie will be* thereby in part, at least, extinguished: the rug, the carpet, the table-cover, whatever material is at hand, must be snatched up—no matter at what risk of breakage,—and flung on the body, being at the same time tightly pressed down, so as to suffocate the flames.

To a man, the first idea will be to take off his coat, and, if a large one, hardly anything better could be obtained; but still he must not attempt to stifle the fire by wrapping it round the victim as she stands; *she must be forced down;* for while he believes he is conquering the flames above, the deadly enemy may be, unseen, destroying the sufferer below. If water is at hand, a pail suddenly dashed over the person might extinguish the fire, and act beneficially; but before such a volume could be obtained from a tap the victim would be past the benefit of aid.

Independent of the fatal consequence arising from the ignition of the clothes, from the violent shock conveyed to the nervous system, all burns over the *head, chest, throat,* and *bowels* are considered mortal, from the inflammation certain to ensue from the powerful stimulus applied to the parts above the vital organs lying below.

Before proceeding to the treatment of burns, there are three points which cannot be too firmly fixed on the mind of those who undertake the care of the sufferer. *First, never to expose the burnt part to the air. Secondly, as quickly as possible to cover it from all contact with the atmosphere, for the cold air coming in contact with the inflamed part is the source of all the suffering. Thirdly, the blisters raised are not to be cut or broken, and burnt clothes never removed from the flesh to which they adhere.*

TREATMENT.—Sheets of wadding, the wool next the skin, are as quickly as possible to be placed over the burnt parts, or folded round the arms and legs, removing everything from the body but such fragments as adhere to the skin. This operation cannot be performed *too quickly,* so as to exclude the cold air, a second coating of the wadding being in the same way laid over and round the first, so as to exclude all access of air to the parts. If an abundance of soft wool is at hand, it may be substituted, the same precautions being adopted to envelop all parts equally from the air.

Should no wadding be in the house, and *while a person rushes to the haberdasher's for the sheets required,* the dredging-box, filled with flour, is to be dusted copiously over every part exposed, and the wadding afterwards put on over it. When this has been done, and bottles of hot water placed at the feet, a full dose of laudanum (30 or 40 drops in a wineglass of brandy and water), are to be given to the patient, who, according to the despatch used in covering up the burns, will the sooner experience a cessation of pain; but where there is little or no pain, in consequence of the great shock to the system, it would be wrong and injurious to give opium. When, however, the powers are sinking, and the pulse low, ammonia, ether, and brandy are to be given in small doses every half-hour, adding bottles of hot water to the thighs and the armpits. In cases where there is neither wadding nor cotton to be had, the body must be covered with flour, and swathed in bandages to keep it on.

Generally speaking, when the patient recovers, burns heal rapidly; but in no case must the wadding be removed till the parts beneath are healed, or nearly so, or else every part will become a suppurating sore. According as the head, chest, or throat are affected, the treatment must be regulated to meet the symptoms that arise peculiar to each. When burns occur over joints, great care must be taken to move the limb a little every few hours as soon after the accident as possible, or there may be danger of a fixed joint; at the same time care must be taken that the limbs are kept straight, the skin of the forearm not being allowed to touch that of the arm proper, nor must the chin be permitted to rest on the neck, without in either case an interposition of wadding, or else the two parts will grow together, like some of the objects so frequently seen in the streets.

For trivial burns on the hands, arms, and face, apply lint soaked in the extract of lead, over which lay a piece of wadding, and secure the whole with a bandage; or the wadding may be used alone, so that the part is not uncovered till the burn is healed.

Some practitioners use sweet oil, or a mixture of linseed oil and lime water, called, from the place where first used, Carron oil. The directions given above are those which close observation and long experience justify as the best, safest, and most expeditious. See FIRE, SCALDS, and MINERAL ACIDS, BURNS FROM.

BURSÆ MUCOSÆ. — Small membranous sacs or bags, situated about the *joints of bones* and articulating surfaces, and being filled with an oily secr
called the "joint oil," they discharg
thin, oily mucus into the joint to
cate it and the tendons passing
bones, and insure a constant smoot
glding motion. The bursæ are some
liable to inflammation from pressure,
Bunion, which see.

BUTTER.—An unctuous subs
the product of cream by churning,
with cheese, forming the great nutr
principle of all milks. Butter,
cheese, contains an active principle,
Butyrine, from which butyric ac
obtained. Medical men have been gr
divided in their opinion as regard
nutritive or non-nutritive properti
this useful and most necessary ar
That butter is both wholesome and n
tive in its natural state there can b
doubt, and as an article of diet, even
invalid, is of undoubted consequence
is only when butter is taken on hot t
or melted and used with flour in a li
state with vegetables, or as a sauce,
butter becomes flatulent on weak stom
and turns rancid on many otherwise st
ones. This question, however, wil
considered more absolutely under
article Food, which see.

BUTTERMILK.—The liquid le
the churn after making butter. A
nutritious, slightly acid beverage,
either in health or sickness may be t
with advantage.

In Ireland and Scotland it is la
used as an article of food, and freque
in the former country, constitutes the
nitrogenous article the people can pr
to animalize their large proporti
vegetable aliment.

When fresh from the churn it i
tremely nourishing, and as a bevera
fevers may be ranked among the
diluents we possess. Buttermilk m
any time be extemporized by shak
quantity of new milk and a small qu
of cream for some minutes in a b
until particles of butter float abou
mass; after separating which by a str
it is fit for use.

BUTTER OF INDIA. See GH

BUTTER, VEGETABLE. — N
has not only supplied us with a cov
and a bread-fruit tree, but also a b
tree. In the kingdom of Bambar
Central Africa, there grows a tree
unlike the oak, which produces a n
great abundance, as large as a ches
This nut contains a pith of rich vege
marrow, pleasant to the taste, nutri

and having all the properties of an animal butter, as far as flavour and purposes are concerned. To obtain this unctuous article, the nuts are gathered and dried in the sun; they are then powdered, or beaten very fine, and boiled in water, and as the water cools, the butter congeals on the surface, when it is skimmed off and made up into pats for use.

BUXTON WATERS.—These sparkling effervescing waters are highly recommended in all cases of loss of muscular power, paralysis, rheumatism, indigestion, and general functional derangement, especially in diseases of the kidneys and bladder, gout, &c. Temperature of the springs, 82°. See MINERAL WATERS.

C

C is the third letter of the English language. As a numeral, C stands for *centum*, a hundred, but whether from C being the first letter of the word which signifies that sum is undecided.

CABAL.—Traditionary knowledge; from *cabalista*, one instructed in traditionary knowledge. Not to be confounded with the political party in the time of Charles II., so called from the initial letters spelling the word cabal. See "Dictionary of Useful Knowledge."

CABBAGE.—There are several species of the genus *Brassica*, to which this plant belongs; the most important of which are the *turnip*, *rape*, *cole*, and the common culinary article known as cabbage, the *Brassica oleracea*. In consequence of the varieties of soil on which this plant is raised, the difference of cultivation adopted in raising it, and from the industry of the bee in inoculating fresh varieties with the pollen of old, or the mixed seed of several sorts, the different kinds produced of this useful vegetable are almost innumerable. Of all these, the most valuable as a food and vegetable are the *close-hearted*, and the *spreading*. Of the first, the most esteemed are the savoy and York; and of the other, the colewort and Scotch kale. Cabbages are a flesh-producing vegetable, whether given to man or animals: for the latter, especially milch cows, sheep, and oxen, they are considered an admirable food; in the former, when imperfectly cooked, and only partaken of rarely, they are apt to produce flatulence; but these effects *will soon subside* if repeated for a short time, and eaten thoroughly boiled and pressed. No people consume cabbage more largely than the Germans, with whom it enters, more or less, into every dish they eat. The best way of cooking cabbages, to deprive them of all the ingredients likely to produce flatulence and indigestion, is to boil them in two waters before serving them at table. See SOUR-KROUT, and FOOD.

CABBAGE PALM. See ARECA.

CABBAGE-TREE BARK.—This tree, which grows in great abundance in most of the West Indian islands, and especially Jamaica, is highly valued for its medicinal qualities, of which the bark, *Cortex Geoffragii inermis*, is the part most generally esteemed. It is imported into this country in long, thick, fibrous pieces, of a brownish ash colour, with a resinous fracture, sweetish-bitter taste, and unpleasant odour, and containing a considerable amount of gummy matter.

MEDICAL PROPERTIES AND DOSE.—The cabbage-tree bark has been principally used as a tonic and anthelmintic, or vermifuge, a drug to destroy worms. In this respect it is especially efficacious, and, as it acts more directly on the large intestines, is best suited for the large round worms, *lumbrici*, infesting that portion of the canal. For this purpose, it is either given in the form of the powder of the bark, in doses of from 10 grains to 1 scruple every day for three or four times, till it acts efficiently on the bowels, which it does much after the manner of jalap; or it may be given in the form of decoction, prepared in the following manner. Take of—

The roughly bruised bark
of the cabbage tree . 1 ounce.
Cold water . . . . 2 pints.

Boil slowly till reduced to one pint; strain, and, when cold, give to children from one teaspoonful to a tablespoonful every morning, according to the age, from two years to twelve; and for an adult, from one to three tablespoonfuls.

The cabbage tree is sometimes apt to produce unpleasant symptoms, such as excessive vomiting, fever, and delirium, and occasionally fatal results have followed its use. The antidotes in such cases are copious draughts of warm water, the warm bath, castor oil, and large quantities of lemonade.

CACÆMIA.—A term derived from two Greek words, signifying bad and blood. A bad or diseased condition of the blood.

CACAO. See COCOA.

CACHEXIA.—A professional term to

express that bad or depraved condition of the body or system usually found to exist before the attack of any serious malady, such as fevers, inflammations, &c. A scorbutic or scrofulous condition of the body; such a depraved state of the system at large, that nature is unable to carry on any healthy function, nutrition and the other vital organs being endangered. According to Cullen, cachexia forms a class of disease including three orders.

CACHINNATION. — Immoderate laughter; hysterical and uncontrollable hilarity; sometimes the result of disease, sometimes proceeding from some vegetable poison.

CACODÆMON.—An evil spirit supposed by our superstitious ancestors to preside over the destinies of men, and to afflict the human body with sickness and disorders of a dangerous character. The nightmare was occasionally attributed to the influence of this malign spirit.

CACTUS.—A genus of succulent plants, permanent in duration, and singular in structure; generally without leaves, and having a stem and branches jointed, and commonly armed with strong, formidable spines. The cactus is a native of the West Indies and South America, the species having more than ninety varieties.

CACTUS.

The most important of the species are the smaller and the greater melon thistle, the triangular cactus, the strawberry pear, the Indian fig or prickly pear, and the *Barbadoes* gooseberry. The species belongs to the class *Icosandria*, and order *Monogynia*, and the Natural order *Cactaceæ*.

CACTUS OPUNTIA. See INDIAN FIG.

CADAVER.—A body deprived of life, a corpse, from whence the term *cadaverous*, having the appearance and colour of a dead body.

CADMIA.—An oxide of zinc, collected on the sides of furnaces where zinc is sublimated.

CADMIUM.—A metal discovered in the carbonate of zinc, of a fine white, slightly inclining to blue colour, and of a compact friable texture. It is both ductile and malleable, and, when fused, yields octohedral crystals.

CADDIS.—A Scotch surgical term for scraped lint. See CHARPIE.

CÆCUM.—The name given to a small portion of the intestinal canal, from its having but one opening, from which circumstance it is called the blind gut, *cæcus*. The cæcum is the commencement of the large intestines; begins at the termination of the ilium, and ends at the commencement of the colon.

CÆSARIAN SECTION.—An operation in surgery which comprises the dangerous and difficult task of cutting through the abdomen of the mother, opening the womb, and extracting the child from its enclosure without undergoing the natural process of parturition or birth. The causes which have led to this unnatural and dangerous mode of delivery are somewhat numerous; such as the sudden death of the mother, either prior to, or at the moment of, being seized with labour pains; great physical exhaustion; Superfœtation (which see), or malformation of either mother or child. The operation consists in making a perpendicular lateral incision through the abdomen, with a short transverse cut, and then reflecting [illegible] triangular flap obtained, opening the [illegible] of the womb, removing the child, tying the navel, and, after taking away all secondaries, closing both apertures [illegible] few interrupted sutures, and treating [illegible] patient as occasion demands.

Though this operation has been [illegible]quently performed, it has seldom effected with perfect success as re[illegible] the life of both mother and child[illegible] infant living, but the mother gen[illegible] dying. There are three conditio[illegible] which it is only proper to perfor[illegible] Cæsarian section:—when the child is [illegible] and the mother dead; when the c[illegible] dead, and cannot be expelled in the n[illegible]

the unnatural smallness of the
and when both parent and
alive, but, from the size of the
he malformation of the mother,
chance of the child being ex-
the natural manner. Besides
ever, there are other causes that
nand the operation, for which
ANCY, LABOUR. As a general
uld be regarded as bad practice
so capital and dangerous an
luring the life of the mother,
the welfare of the parent in
or the probability of saving an
may be misshapen, and die in

INE.—A bitter principle, ob-
n coffee, consisting of carbon,
ydrogen, and oxygen, and is
l into fine filaments by sub-
lead.

UTI TREE.—A celebrated tree
ast Indies, Borneo, and the
eninsula; used in the treatment
and called, medicinally, *Mela-*
puti.

UT OIL.—A much-prized oil,
from the above small tree or
collecting the dry leaves, putting
bags till they ferment, and the
ecomes impregnated with the
The bags and their contents
cut up, put into boiling water,
il distilled. The oil is so volatile,
quantity obtained so small, that
ays realized a most extravagant
t resembles the essential oil of
ns somewhat in flavour, while in
partakes of a mixture of carda-
mphor, and turpentine.

AL PROPERTIES AND DOSE.—
lly, it acts as a powerful diffusible
t, antispasmodic, and diaphoretic.
rst taken, it produces a sense of
in the stomach, raises the pulse,
kly induces a copious perspiration,
been highly recommended in all
ic diseases on account of these
especially in palsy, hysteria,
ism, and any affection of the
system; and as an embrocation
e oil, has been highly extolled in
l chronic rheumatism as a remedy
he pain in both diseases. It has
n found of great service in cases of
e, when put in the tooth on a
cotton. The dose is from 1 to 6
aken on a lump of sugar, in
e, or any agreeable viscid vehicle.

ABASH TREE.—A tree of two
known in *botany by the generic* name of *Crescentia.* The shell of the fruit is used for cups, bowls, dishes, and other utensils.

CALAMINE.—The native carbonate of zinc, which, when fused with copper, produces brass, and when simply sublimated, powdered, and washed, forms the well-known dusting powder formerly used for infants, called Tutty powder. It is also mixed with lard, wax, and rosin, to form Turner's cerate. It is never given internally, and is now quite superseded as an external remedy by the violet powder.

CALAMINTHE, OR CALAMINT.—In botany, a species of melissa or balm; an aromatic plant, formerly greatly used in medicine as a cordial, stomachic, carminative, and at one time regarded as a valuable *alexipharmic* medicine, or antidote, which, taken for some time, would fortify the system from the effects of any sudden poison. See MINT.

CALAMITE.—A mineral, supposed to be a variety of the *tremolite;* found in imperfect, rounded, prismatic crystals, somewhat resembling a reed.

CALAMUS.—A genus of plants, of which there are many varieties. That most familiar as a medical plant is the *Acorus calamus,* or Sweet Flag, which see.

CALCAREOUS.—Any earth or preparation having the properties of lime, as calcareous earths and calcareous stones. Calcareous spar is a crystallized native carbonate of lime, found in veins in all rocks, from granite to alluvial strata.

CALCINATION. — An operation effected by heat, by which any volatile substance is expelled from another ingredient with which it is combined: thus, chalk and magnesia, which are both carbonates of those bases, if submitted to a great heat, have their carbonic acid gas expelled, leaving behind the pure or quick-lime, and the pure or calcined magnesia. In the same manner, when metals are fused or calcined, their characters are in the same degree altered, and the metal, purified of its volatile earthy impurities, absorbs oxygen from the air, and an oxide is the result, the process being called oxidation; when according to the heat employed is the amount of oxygen absorbed by the metal, and the colour and strength of the product. Gold, silver, and platinum are, however, exempt from this rule, being noble metals.

CALCIS AQUÆ.—The medical name of lime water. See LIME.

CALCIS OS, or Heel-bone.—The largest of the seven bones constituting the instep or tarsus. It is situated posteriorly under the astragalus, and divided into a body and processes, with a large tuberosity projecting behind to form the heel.

CALCIUM. — The metallic basis of Lime, which see.

CALCULUS.—A stone. In medicine, any hard concretion, however formed, found in the bladder, kidneys, gall-bladder, or other parts of the body, is called a calculus. Such concretions receive different names, according to the organ or parts in which they form: thus, the chalk-stones, or concretions formed on the joints of gouty subjects, are called *arthritic calculi;* when deposited in the articulations, *articular calculi.* In the gall-bladder or ducts, they are denominated *biliary calculi;* and in other parts, *lachrymal, pancreatic, pulmonary,* according as they are found in the duct of the eye, the pancreas, or the lungs. The only two varieties of these several calculi to which we shall refer are those found in the bladder and the bile. For these, see Stone in the Bladder, and Gall-Stones.

CALEFACIENT.—To make warm or hot. Any substance medicinally applied to the body to produce external or superficial heat, and effect a mild kind of counter-irritation. The warming plaster, poultices of mustard and flour, hot water and turpentine, hartshorn and oil, belong to the class of what may be termed calefacients.

CALENTURE. — A Spanish word applied to all sudden diseases of the head and brain, such as seamen and Europeans were formerly much subject to in the low latitudes of America and India, in which the patient was deprived of all consciousness, and appeared to be labouring under an attack of sudden mania, or inflammation of the brain. After suffering intense pain, the patient was seized with the hallucination of the sea being an extended plain of verdant pasture, and which nothing short of personal restraint could prevent him rushing forth to stroll in. The disease which nearest approaches to the calenture is now called Sunstroke, which see.

CALF'S-FEET JELLY. — A rich, gelatinous broth, made by long boiling from the tendinous parts of the feet and knuckles of calves, and either given in a liquid and warm state, pure, or reduced with water, or cold in the form of a jelly. It is highly nutritious, and makes the basis of an excellent diet for invalids and convalescents recovering from a lingering disease. See Gelatine.

CALIDARIUM.—The name given by the Romans to the hot bath.

CALISTHENICS. — The art and science of healthful exercise of the body and limbs. See Exercise.

CALLOSITY. — Preternatural hardness, derived from *callosus,* or *callus.* A term used in surgery to express induration, or any part morbidly hard, as the edges of an indolent ulcer.

CALLUS.—A term given by surgeons to that tough, flexible substance thrown out in all cases of fracture between the two ends of broken bones, binding them together, and which is soon filled up by osseous or bony matter, till the union of the fracture is complete; after which all the callus thrown out like a stiff glue round the broken bones is gradually absorbed, and the finger is unable to detect where the injury was. See Fracture.

CALOMEL. — This useful but much abused drug is a preparation of mercury, or quicksilver. Calomel, the most extensively used drug in the Pharmacopœia, was formerly regarded as a submuriate of mercury, but is now more properly defined as a protochloride of that metal; or mercury in combination with one atom or equivalent of chlorine; while corrosive sublimate, which is also a chloride, has two atoms of the same gas, making it a bichloride,—the one extra atom being sufficient to convert a valuable drug into a deadly poison.

Calomel is prepared in different ways—as will be explained under the head of the metal itself,—and is kept in the form of a fine, dense, white powder, devoid of smell, and of a slightly sweet taste.

Medical Properties and Dose.—Calomel is used as an alterative, an aperient, sialogogue, a purgative, and sometimes as a local stimulant in external application.

Calomel may be given at any period of life, from the infant a few weeks old to the octogenarian; and on account of its being devoid of taste, and lying in small compass, is well adapted for children, though it should never be long continued, or administered alone when employed as a purgative, or to act in any manner on the bowels. As calomel is apt to act on the salivary glands and affect the mouth, it is impolitic to employ it in cases of thrush or any ulceration of the mouth. As an alterative, the dose is from 1 grain to 1½ grains twice a day, with 3 or 4 grains of rhubarb; as an aperient, from 3 to 4 grains, with 5 grains of rhubarb and 4 of jalap; as a purgative, 5 grains of calomel, with 10 of jalap and 4 grains of rhubarb, or 5 grains of scammony instead of the latter article, will make an effective purgative powder. When given as a sialogogue, the dose is 1 grain every 6 or 8 hours in 5 grains of powdered kino, continued till the mouth is affected. See SALIVARY GLANDS, and SALIVATION. For children the doses must be proportionally reduced.

CALOR.—The Latin name for heat, and signifies any degree of warmth, from 80° to 212°, or boiling water heat.

CALORIC.—A word used by chemists to express the amount of heat contained in all bodies in nature. This is divided into *sensible* and *insensible*, *free* and *latent* caloric. Some bodies give off caloric on being mixed with water, and others absorb it. The mixture of water and sulphuric acid and water with quicklime are examples of the first, and water at the moment of freezing of the last. See HEAT.

CALUMBA, OR COLOMBO.—A well-known bitter root, obtained from the *Cocculus palmatus*, a native of the woods on the eastern coast of Africa. The calumba root is cut into thin circular slices, and being dried in the sun, is exported to Europe. It is of a light brown colour, with a slightly aromatic odour, and an intensely bitter taste, but, like quassia, is destitute of the tannin usually found in vegetable bitters.

MEDICAL PROPERTIES AND USES.—Calumba acts on the system as a stomachic and tonic, and, from its want of astringency, is one of the most useful bitters we possess, and particularly serviceable in cases of indigestion proceeding from biliary disturbance, for which, in combination with dried carbonate of soda and ginger, as in the following form, it becomes a most valuable remedy. Take of—

Powdered colombo . .	18 grains.
Dried carbonate of soda	2 scruples.
Powdered ginger . .	12 grains.

Mix, and divide into six powders, one to be taken an hour before each meal; or, as an ordinary stomachic for weak digestions, 4 or 5 grains of colombo, mixed with a teaspoonful of Gregory's powder, taken every morning, will be found extremely beneficial. As a *tonic in* fevers and other diseases, it may be given either in doses of 8 grains, or in infusion of the root with the tincture of muriate of iron, in doses of an ounce of the infusion every six hours, with 10 drops of the tincture of iron in each dose. The only preparations of this useful drug are the tincture (*tinctura calumbæ*), infusion (*infusio calumbæ*), extract (*extractum calumbæ*), and the powder (*pulvis calumbæ*).

CALX.—Lime, which see. Also the heel. See CALCIS OS.

CALYX.—In botany, the cup of the flower in plants, or the small green leaves on the top of the stalk in herbs.

CAMBOGIA.—The medical name of the plant that yields the beautiful yellow gum resin, the pigment and drug known as Gamboge, which see.

CAMBRIDGE DRINK.—An invigorating beverage, both refreshing and stimulating for a summer drink, made by mixing equal quantities of the best ale and soda water, and drinking immediately after combination, and before the escape of the carbonic acid gas. See DRINKS.

CAMOMILE OR CHAMOMILE FLOWERS.—*Anthemis nobilis.* These well-known flowers belong to the Natural order *Compositæ*, and are cultivated in many parts of Great Britain. Two varieties are kept in the shops, the single and the double. The former, a darker and smaller flower, is called the Scotch; the latter, larger and much lighter, known as the English camomile flower. Camomiles are among the most useful and safe of our domestic medicines: they have a fragrant and grateful odour, a warm, bitter taste, and possess a large amount of pungent, aromatic oil.

MEDICAL USES AND PROPERTIES.—These flowers act either as a stomachic, tonic, anthelmintic, or as an emetic, according to the manner or dose in which they are taken.

The only preparations of camomile in the Pharmacopœia are the infusion (*infusio anthemidis*), the powder (*pulvis anthemidis*), and the extract (*extractum anthemidis*). The infusion—made by pouring a pint of boiling water on 4 drachms of the dried flowers, infusing for five or six hours, and straining the liquor when cold—will either act as a stomachic or tonic, according to the dose. For the former purpose, two tablespoonfuls should be taken every morning before *breakfast*; for the latter effect, two tablespoonfuls should be taken every four hours, or 5 grains of the powder three times a day. When employed as an anthelmintic, or destroyer of worms, 10 grains of the powder should be given in treacle every morning on waking, followed every fourth day by a dose of flowers of sulphur. When an emetic is required in a hurry, a copious draught of the warm infusion will generally answer the purpose very readily. The extract is only used to make up stomachic or digestive pills, when it may be taken in quantities of from 3 to 6 grains.

CAMPEACHY. — The general name of the logwood tree; so called from the bay of that name in the Mexican Gulf, from whence the wood is chiefly exported. See LOGWOOD.

CAMPHINE. — A name given by chemists to an imaginary spirit said to reside in the artificial camphor obtained by a mixture of turpentine and hydrochloric acid. The article used for lamps, called camphine, is only highly rectified spirits of turpentine.

CAMPHOR.—A peculiar concrete substance; a pure resin, existing in many plants, but obtained chiefly from two trees, the *Laurus camphora*, or Indian laurel, and the *Dryobalanops camphora*, a native of Borneo, Sumatra, and the Spice Islands. From the first it is obtained from the distillation of the wood; and from the second it is found ready formed, exuded in masses, from which it *is procured by cutting* up the tree, removing the concrete substance, and purifying it by boiling water and distillation.

CAMPHOR TREE.

All parts of the tree are so impregnated with this resin, that it can be obtained from roots, leaves, trunk, and boughs. It is the stem, however, that is generally used, which, being cut into small pieces, is placed in a still, with water, and as the heat increases, the volatile substance is driven off, and rising to the top of the still, which is kept cold, it there adheres in a mass of fine crystals, which assumes the shape of the head of the still, that of a concave ring or basin, not unlike the sink basin in lavatories, with a circular aperture at the bottom, the whole being about three inches thick. The first distillation is always very impure, and requires a second or third process before the camphor is obtained perfectly pure and white.

PROPERTIES.—Camphor is lighter than water, soluble in alcohol, ether, turpentine, in essential and common oils, in vinegar and naphtha, and almost totally insoluble in water, though some of its essential oil is easily diffused through water. It is very volatile, extremely inflammable, burning with a white flame, and emitting a large volume of smoke.

In appearance, camphor is a white, semi-pellucid, brittle substance, resembling spermaceti; tough and friable, but not easily pulverized. It has a strong, peculiar, pungent, but aromatic odour, with a sharp, bitterish taste, accompanied with a sensation of cold in the mouth.

MEDICAL USES AND PREPARATIONS. —This most important drug, for which we are almost entirely dependent on the Dutch, who have the monopoly of its purification and import, acts on the system in many ways, each operation being perfect of its kind. The most important of these are—as a stimulant and consequent antispasmodic, a diaphoretic and expectorant, a sudorific and a diuretic, a narcotic and sedative, and externally as a discutient. Camphor, though acting, in the first instance, as a stimulant to the system, produces subsequent depression, which is always in a ratio with the first excitement. In general, it excites increased action without producing acceleration of the pulse; unless the dose is large, when, like opium, the pulse becomes full and soft.

It would take a page to enumerate all the diseases and affections in which camphor may be used with advantage; with bark or quinine, valerian, assafœtida, ammonia, musk, and opium, it is repeatedly given in typhoid diseases; with calomel and opium, in English cholera and other abdominal diseases, it exercises a most beneficial effect; while dissolved in oils, or mixed with unguents, it forms an admirable embrocation for rheumatic affections, or as a discutient in tumours. Dissolved in acetic acid with some essential oils, it makes the aromatic vinegar so highly esteemed as a restorative in faintings. The usual forms in which it is administered are—that of a powder, to which state it can be easily reduced by a drop or two of alcohol, and then made into a pill, when the dose is from one to three grains; or an emulsion, by rubbing a few grains down in a mortar with sugar, and mixing it with almond emulsion; or in mixtures, to which one of the camphor preparations are added: but the most general form for internal use is either that of a pill or mixture, the camphor water being made the vehicle: with squills and calomel, or antimony, it acts powerfully on the kidneys; and in dropsies, the camphorated oil, rubbed over the body, produces a very rapid reduction of the swelling by its immediate action on the kidneys and bladder. The preparations of camphor in the Pharmacopœia are—the spirit, *spiritus camphoræ*, the dose of which is from 5 to 10 drops, in water; the tincture, *tinctura camphoræ composita*, or *tinctura opii camphoratæ paregoric*, dose from ½ drachm to 2 drachms; the water, *aqua* or *mustura camphoræ*, the dose of which is from 2 to 4 tablespoonfuls; and compound camphor liniment, *linimentum camphoræ compositum*.

In an overdose, camphor produces vomiting, giddiness, coma, and other serious symptoms of the brain and nervous system. To counteract these dangerous effects, a mustard poultice should be placed on the pit of the stomach, and wine and opium given in repeated doses till the symptoms abate. Five drops of laudanum in a glass of wine every hour, an enema of a pint of gruel, 1 drachm of tincture of assafœtida, and 40 drops of laudanum, being also used if necessary.

The French use the vapour of camphor largely in chronic rheumatism, and with considerable effect. In spasmodic asthma, a flannel soaked in spirits of camphor, and placed on the chest, and then covered over with oilskin, is often most serviceable. Camphor mixed, in the form of a fine powder, with chalk, makes a very excellent tooth-powder in certain conditions of the mouth and teeth. See TOOTH-POWDER.

Camphor—either alone, a small piece being placed in the mouth, or dissolved in turpentine, and a few drops of the liquid, on cotton, put in the decayed tooth—will frequently relieve the toothache when nothing else will succeed. See TOOTHACHE.

CANAL.—A word derived from the Latin *canna*, a reed; any hollow tube or pipe, bloodvessel, or fistulous opening, may be so called, the word *canalis* being sometimes employed in anatomy.

CANCELLI.—The spongy, honeycombed appearance observed in all bones between their external and internal plates.

CANCER.—A peculiarly malignant and dangerous disease, so called from the Latin *cancer*, a crab, because the ancients believed that the yellow and discoloured veins and lines leading from the seat of the disease bore some resemblance to that crawling animal, but professionally known as *carcinoma*.

Cancer, to use the popular name, is divided into two forms or stages—*scirrhous*, or occult, and *ulcerated*, or open cancer; the first being the primary stage, when the disease consists merely of a hard, painful tumour or swelling; the second, that advanced condition when the skin, having become involved, is in a state of open ulceration, discharging from its ulcerous mass a thin, irritating, and fœtid discharge. Of all the diseases that fall to the care of the surgeon, cancer is the most distressing to witness, and most hopeless to attend, for all parts of the body are liable to its inroads; though the organs most frequently attacked are the breasts of females, the glands generally, the womb, lips, tongue, eyes, nose, tonsils, and the skin. The lower lip in men, and the mammæ in women, are, however, the parts most frequently invaded by the disease.

Cancer seldom occurs under twenty-five years of age, the most general period for its attack being from fifty to sixty. A peculiarity of this disease is, that the younger the patient when attacked, the more rapid is the progress of the disease. Thus, in youth, cancer will frequently run its career in a few weeks, while in age it will continue in a state of torpidity for years.

CAUSES.—It is still an undecided question as to what is the exciting cause of cancer, surgeons having for years devoted their attention to the solution of this still doubtful point. The most modern theory is that cancer proceeds from some *special* disease in the blood, and that this condition of the circulating fluid is hereditary, and may be transmitted from father to son, or from mother to daughter.

SYMPTOMS.—Scirrhus, or a cancerous tumour, commences with a hard and painful swelling (if in the breast) of the gland beneath, neither enlarging nor diminishing, but remaining for a length of time without any apparent change. After a certain period the swelling assumes an uneven character, feeling, under the fingers, irregular and knotty; the enlargement gradually advances, attended by lancinating pains, darting from the centre of the breast, and extending to the armpit, where the small absorbent glands become slowly enlarged, adding their proportion of pain to the suffering endured from the seat of the disease. In consequence of the enlargement of these glands, the functions of the lacteal and lymphatic systems are interfered with, and the general nutrition of the body being impaired, the patient becomes weak, pale, and emaciated; the appetite is weakened, a distressing cough disturbs the patient, who, between pain, debility, and cough, is deprived of sleep or repose. The disease may continue in this state for months or years, till a trifling blow, the pressure of a part of the dress, a confinement, or any cause, however slight, at once calls all dormant action into vitality; the skin over the tumour becomes discoloured and puckered, an inflammatory action sets in, ulceration takes place, and a large, deep cavity or wound, discharging a thin, ichorous, and fœtid suppuration, succeeds, while a series of swollen veins and livid lines diverge in all directions from the open cancer.

The emaciation continues, a hectic fever, with all its distressing symptoms, attends the disease, which, with the pain and constant suffering endured by the unfortunate patient, after a time, when the system is entirely poisoned by the virus of the disease, terminates years of anguish by a wished-for death.

CANELLA ALBA.—White canella, or wild cinnamon. The name of a tree belonging to the Natural order *Meliaceæ*, the bark of which is occasionally used in medicine as an adjunct to other drugs, but very seldom by itself. The bark has aromatic and slightly tonic properties, and is occasionally used with quassia, cascarilla, or cinchona, as an agreeable aromatic in infusions of those barks. The only preparation into which it enters is the *compound aloetic powder*. See HIERA PICRA.

CANINA FAMES.—A dog's hunger, an inordinate appetite. A disease among the old doctors, where the patient was said to have an insatiable hunger, which, like that of a dog or wolf, could never be appeased.

CANINE MADNESS. See HYDROPHOBIA.

CANINE TEETH.—The dog, or eye teeth. Four teeth, two situated in each jaw, and one on each side of the four incisors. In man, though extremely useful, these teeth are, in a measure, only rudimentary, while in the dog and lower animals they are fully developed, and known as the fangs. The canine teeth are now generally called the cuspidati, or teeth with one point. For the function and growth of this set of teeth, see article TEETH.

CANKER.—This term, though now seldom used in medicine, formerly implied an eating, spreading sore or ulcer, occurring more particularly in the mouth, when it was called *cancrum oris*. A gangrenous form of scrofulous ulcer, dependent on a diseased state of the system, the result of unwholesome or insufficient food, and, like thrush, or *aphthæ* of the tongue and gums, rather the symptom or consequence of disease than a disease itself, and as such, only to be cured by constitutional means, and a strict attention to diet and regimen. Sometimes, however, canker of the mouth assumes a malignant character; the gum becomes involved in the mischief, the teeth fall out, a thin, fœtid discharge takes place, the cheek suffers in time, with an excessive flow of saliva, and a gangrenous ulcer harasses the patient both by night and day.

TREATMENT.—The treatment in this disease mainly consists in supporting the patient's strength, and giving the system a reactionary bias by means of a full, rich diet, with wine or stout, and a course of quinine and antispasmodics, at the same time that the cankerous sore is locally treated with a stimulating lotion of chloride of lime or chloride soda, with such other means as the symptoms of the case seem to call for.

CANNABIS INDICA.—The Indian hemp; an article much esteemed by the faculty in the East on account of its reputed antispasmodic properties, on which account it is largely used in cases of tetanus, and other neuralgic affections. The preparation chiefly used is a resinous extract, which, in doses of from 1 to 8 grains, is highly esteemed in cases where a narcotic, anodyne, or antispasmodic effect is required. See Hemp.

CANTHARIDES.—The Spanish, or blistering fly, so named from the Greek word for a beetle. The cantharides, medically called *lyttæ*, are beautifully painted insects, about an inch long, of a bright blue and gold colour, mixed with shades of green and purple, and found in great numbers in Spain, the south of Italy, the coast of the Levant, and other places, though at one time the chief place of their capture and exportation was Spain.

The manner of procuring these insects is somewhat curious. During the heat of the day, they congregate in vast numbers on the boughs and branches of trees, where they remain for some hours in a state of complete torpor. A large sheet or sail is spread under the tree all round the stem; men then ascend the trunk, and, beginning at the top, shake every bough and branch in such a manner, that the powerless insects fall in showers upon the cloth. They are then gathered up in small bags, like pillow-slips, the mouth tied, and held over the fumes of hot vinegar, which quickly kills them. They are next spread out in large sieve-like frames, and exposed for some days to the sun, till sufficiently dry, when they are packed for exportation.

Character and Properties.—The cantharides are insects of the beetle class, armed with brilliantly coloured scales, and have a strong, heavy, and nauseous smell, and, used medicinally, possess stimulating properties of a special order, acting, when powdered and applied externally, as a rubefacient and blister; and when taken internally, on one set of organs only, that of the kidneys and bladder, or urinary system. So important is this latter action, that in ordering a blister, or prescribing the drug in any form, this action ought never to be forgotten, as a most painful retention of the water, or strangury, will frequently follow the application of even a small blister, or a trifling dose of the tincture of the flies. On this account, and to obviate any such symptoms, frequent draughts of barley water or linseed tea should be given while under the influence of cantharides. In extreme cases it may be necessary to give opium and camphor, but in general the above articles will be found sufficient. Cantharides in an over-dose act as an irritant poison, producing very serious consequences. See Poisons.

Medical Properties and Dose.—In many affections of the kidneys, bladder, uterus, and urethra, cantharides judiciously employed is a medicine of singular efficacy, in which cases it is used in the form of tincture, *tinctura lyttæ*, the dose being from 5 to 15 drops every four or eight hours, in some appropriate combination. In certain forms of dropsy and diseases of the skin, it is also employed with benefit, given in the same dose. As an external application, the tincture, combined with castor oil, rosemary, and essential oil of bitter almonds, makes an excellent application to the head for the growth of the hair (see Hair); and as a stimulant in certain conditions of chronic rheumatism, the compound cantharides liniment is highly beneficial. The most important preparation is the plaster, *emplastrum lyttæ*, made of suet, rosin, yellow wax, and powdered cantharides. See Spanish Flies.

CANTHUS.—In anatomy, a term applied to the angle or corner of the eye, the corner next the nose being called the great or inner canthus, and the other the outer or smaller canthus. In the former are situated the small red glands, covered with a fold of the lining membrane, called the *puncta lachrymalis*, the funnel-shaped commencement of the ducts by which the tears, constantly exuded to moisten the eyes, are received, and carried into the nose and mouth. See Eye, and Tears.

CANULA.—The sheath of an instrument called a *trochar;* a kind of small bayonet, the finely pointed extremity of which protrudes beyond the canula about half an inch, so that when plunged into a collection of water or pus, the trochar is withdrawn, and the sheath, or canula, left behind allows the fluid to be discharged in a stream through its tube or pipe. The canula is always made of silver, and, if necessary, can be left in the sac, and secured by strings to the body. See Trochar.

CAOUTCHOUC (*cow-chook*).—Indian rubber. The article so universally known as Indian rubber is a concrete, elastic gum, of a peculiar character, obtained in a liquid form from transverse incisions made in the bark of the Caoutchouc, or Syringe Tree,—a native of Guiana, Quito, Cayenne, and other parts of South America,—and also of several varieties of Asiatic trees.

The tree that yields the finest juice, the *Hœvea caoutchouc*, is one of the most magnificent objects of American forest scenery, and only ranks second in beauty to the banian, or Indian fig. The tree reaches a height of nearly 100 feet, and can be seen for miles, its lofty crown and spreading branches making it a most conspicuous feature in the landscape.

Immediately below the incision, a deep hole is scooped out of the earth, in which a large plantain leaf, folded up in the shape of a rude cup or basin, is placed, to receive the yellowish juice which exudes and drops from the incision, at first flowing freely, but after two or three days it suddenly ceases, the last exudation forming a cuticle over the wound, and effectually blocking up the drain. The juice, collected when only partially hardened, is spread out on moulds, and exposed to the sun for a short time, and hung over smoke till quite dry, when it is cut into masses and exported in the forms in which we see it in the market. Caoutchouc is soluble in ether, some of the essential oils, especially that of sassafras, boiling turpentine, and naphtha. Though the Indians had long been in the habit of making oots, shoes, and cloth of it, it is only late years that the value of this ticle has been properly realized by e discovery of a solvent for the gum hich does not injure the elasticity of the article, a property that forms the great value of Indian rubber in a manufacturing sense. It now enters into the formation of some of the most useful as well as ornamental articles of surgical and domestic application.

CAOUTCHOUC, OR INDIAN RUBBER TREE.

An essential oil, distilled from Indian rubber, burnt in lamps, gives a light equal to gas in clearness and brilliancy.

CAPER.—A prickly, trailing shrub, common to the south of Italy, France, and the Levant, and known botanically as the *Capparis spinosa*, growing profusely in the crevices of old walls, or the fissures of rocks. It is only prized on account of its buds, which are gathered for culinary purposes before the flowers expand, when they are pickled in vinegar, and regarded as a most elegant and wholesome condiment. As such, and as a grateful stimulant to languid and sated appetites, half a teaspoonful of the plain capers and vinegar may be taken with great advantage about an hour before dinner. See Food.

CAPILLAIRE. — A much-esteemed French liqueur, or elegant syrup; made by boiling the best lump sugar with water and the plant called maiden-hair, which imparts an agreeable aromatic flavour to the syrup. In this country it is made by boiling lump sugar, a number of eggs and egg-shells, all mixed together, with orange flower water, removing the scum as it boils, and then straining the syrup and putting it aside for use. A few spoonfuls mixed with water, with or without acid, makes a deliciously cool sherbet kind of drink in hot weather, or for invalids. See Drinks.

CAPILLARY VESSELS.—A system of minute vessels, so called from *capillus*, a hair, because they are so minute and small in diameter as to resemble the hairs of the head. The capillaries are generally situated between the minute terminal ramifications of the arteries, and the commencing tubes of the veins. See Artery. Capillary attraction is that remarkable property by which a lighter fluid, passing through a denser medium, acquires the property of ascending higher than the surrounding fluid. See Absorption.

CAPILLUS. — The Latin for Hair, which see.

CAPSICUM.—The berries, pods, and fruit of the *Capsicum fustigratum*, a plant belonging to the Natural order *Solanaceæ*. There are three varieties of this well-known spice—the Guinea, cherry, and bell peppers. Capsicum is much employed in medicine as a stimulant, carminative, and stomachic, and occasionally as a gargle in certain conditions of malignant sore throat. For properties and dose, see Cayenne Pepper.

CAPSULE. — A word derived from *capsula*, a small box, chest, bag, or cavity. In the former sense it is used by botanists to express the seed-receptacle of fruits and flowers, as the case in which the cardamom seeds are contained, and the spherical cavity, with its internal divisions, for those of the poppy, and commonly called poppy heads. In the latter sense it implies a fibrous or membranous bag, such as that which encloses the joints of the hip, shoulder, &c., and shuts in the synovial sac, when it is called a capsular ligament; and again, when it envelops the liver, and is known as the capsule of Glisson.

CAPTAIN'S BISCUIT. — A kind of biscuit which makes an excellent food both for infants and invalids, and which will be found frequently recommended in these pages. Captain's biscuits are made with the finest wheaten flour and butter, the whole kneaded into a stiff dough, then cut into thin cakes, and baked in a quick oven for 12 or 15 minutes. These biscuits will keep sound for a length of time, and can always be made crisp and more palatable by being placed for a few minutes in a hot oven. In cases of weak stomach or indigestion, the captain's biscuit will be found very beneficial. A few caraway seeds scattered in the flour in the first instance converts them into Abernethy biscuits. For mode of preparing the biscuit for children, see Infant, Food.

CAPUT.—The head, skull, or cranium; the entire bones and muscles of the head and face, with the brain, and organs; the integument and hair of the several parts. See Head.

CARAGEEN MOSS. — A species of Iceland moss, obtained in Ireland, and much esteemed, on account of its softening and gelatinous properties, as a diet drink in pulmonary affections. A strong decoction of the moss becomes a gelatinous mass on cooling, a few spoonfuls of which, heated and flavoured with sugar and lemon peel, form a most agreeable beverage if taken alone, or as a vehicle for medicine. See Iceland Moss.

CARAT.—A weight used in the partition of gold, diamonds, and other precious stones, and signifies $3\frac{1}{5}$ grains Troy.

CARAWAY, or CARRAWAY. — A well-known umbelliferous plant, growing abundantly in Suffolk, Kent, and Sussex; the *Carum carui* of the Pharmacopœia, and belonging to the Natural order *Umbelliferæ*.

Characters and Properties.—The whole of the plant is highly aromatic, its virtues residing in an essential oil yielded in large quantities by the seeds, which is the only part of the plant used for medical purposes. Caraway seeds act as a warm and grateful stimulant, are highly carminative, and in a slight degree antispasmodic. The only preparations kept in the shops are a powder of the seeds (*pulvis carui*), the dose of which is from 5 to 20 grains; the essential oil (*oleum carui*); and the distilled water (*aqua carui*), which may be taken in any quantity, from 1 to 4 ounces. The powdered seeds form one of the most important items in Dalby's celebrated carminative, and, with a little magnesia, make the basis of an excellent corrective carminative for the flatulence and griping to which infants are so liable.

CARBON.—A term used in chemistry to imply the pure inflammable part of charcoal, a simple substance, and one of the four ingredients of organic substances, and the most important constituent of all vegetables.

All vegetable productions absorb oxygen from the air, and give off carbon, while all animals inspire oxygen and expire carbonic acid. Carbon unites with oxygen, forming by that union carbonic acid gas; and with hydrogen to form carburetted hydrogen, or the common gas used to light our streets and houses. It is owing to the presence of carbon in the blood, and the rise of temperature at the moment the oxygen unites with it in the lungs, that animal heat is generated and steadily preserved in the body: hence the necessity in illness of keeping up the supply of carbonaceous material. See Foods, Heat Generating, and Charcoal.

CARBONIC ACID GAS.—Mephitic vapour, or choke-damp. This subtle and dangerous compound, which is either generated naturally in mines during the formation of coal, in wells, damp vaults, beer vats, or in certain strata of the earth, exuding through cracks and fissures in the ground—as in the celebrated Dog Cave near Naples, — or is procured by the burning of carbon in oxygen gas, or by the mixture of 28 parts of carbon with 72 parts of oxygen.

Carbonic acid gas is produced in large quantities during the respiration of all animals, and it is the presence of this gas that makes the atmosphere of a room where several persons have been congregated so offensive to the nostrils and dangerous to the health. It was the presence of this deadly gas, generated from the bodies of 146 persons confined in a vault hardly 18 feet square, that in the few hours between night and morning destroyed 123 of the victims poisoned in the Black Hole of Calcutta by the noxious same manner, a mouse, if placed in a vapour from their own bodies. In the glass vessel, and breathed upon for a few minutes, will be killed by the carbonic acid gas given off from the operator's lungs. The deadly nature of this gas has long been known in France, where it is frequently used as a means of suicide. The apertures in the door and window having been securely closed, the intending suicide lights a pan of charcoal, which being placed on the floor, the person lays himself beside it, or, taking his place at the table, records on paper his sensations as the lethargic sleep creeps on that is to lull him to eternity. Here, again, it is the carbonic acid, generated by the combustion of carbon with the oxygen of the apartment, that produces the mephitic vapour. It is carbonic acid gas, formed by decomposition in the coal measures, and imprisoned for countless ages, that the pick of the collier in a moment liberates, filling the cutting with that sudden death, that, seizing in an instant on the throats of the unhappy miners, kills all before its fatal rush by what has been so characteristically called THE CHOKE-DAMP.

PROPERTIES AND USES. — Carbonic acid gas is the heaviest of all gaseous substances, and is so dense that it may be poured—though invisible to the eye—like water from one vessel to another. It is a non-supporter of combustion, and if directed against a flame or fire by means of a tube, will extinguish the one and put out the other as effectually as an extinguisher or cold water.

It is in consequence of its great gravity that it is always found at the bottom of wells and brewers' vats, or on the surface of the ground, and in the lower hold of ships. In the grotto at Naples a man or child may walk in with impunity, nor unless the person lay down would there be any danger to life, the gas only floating about 18 inches above the floor.

The action of this poison is immediately on the lungs and windpipe, the sufferer feeling as if garotted by a spasmodic contraction of the throat. The muscles of the body become relaxed, the surface pale and clammy, the lips, and eyes, and fingers livid. The general treatment consists in at once removing the body into a purer atmosphere, dashing buckets of cold water over the face and chest, by using friction along the spine, and electricity. See POISONOUS GASES. As a precaution, no person should enter a long closed cellar or vault, or descend a well, without first introducing a light to test the state of the atmosphere. Should the light be extinguished, it is unfit to support respiration, and would be fatal to any one descending. In such a case, a quantity of fresh-burnt lime should be hastily scattered over the ground, or flung down or forward to absorb the carbonic acid. Caustic potass may be used for the same purpose, or a quantity of hot vinegar scattered about, till the atmosphere will sustain a light. Paper, soaked in turpentine, and then ignited, may be thrown into the chamber for the purpose of creating a current of air. The person who descends, whether to rescue a fellow-creature or effect repairs, should tie a cloth over his mouth saturated with lime water, vinegar, or common water, when nothing else can be procured. Medicinally, carbonic acid is employed as a stimulant, stomachic, sedative, and partially as a tonic; and in cases of indigestion and languid appetite this gas, taken as a beverage, is often very beneficial. Much of the benefit arising from bottled stout, champagne, soda water, with sherry, and some of the effervescing mineral waters, arises from the presence of the free carbonic acid gas contained in each. Carbonic acid not only exhilarates the spirits and quickens the imagination, but, when mixed with any liquid containing alcoholic properties, it very greatly increases their intoxicating effects.

In this manner, the poor labouring classes of Scotland are in the habit of obtaining all the genial and exhilarating pleasures of a harmless ebriety at the most economical cost. To a glass of whiskey, poured in a wide-mouthed jug, they add a quart of small beer, nowhere to be obtained so charged with carbonic acid as in Scotland: this, in a violent state of effervescence, is poured on the spirit, and, after a hasty mixture, generally disposed of in two draughts. In this manner, for twopence they enjoy all the warm and stimulating effects which the more refined seek to obtain by expensive wines and more injurious potations. As a sedative, carbonic acid, given in effervescing draughts in those exhausting retchings so common in biliary affections and other conditions of functional derangement of the stomach, often acts with the most signal benefit when neither opium nor hydrocyanic acid produces any effect. Carbonic acid, in the form of yeast, is sometimes used as an application to fœtid and ill-conditioned sores, but is neither so convenient nor so serviceable as chloride of lime for such a purpose. See Yeast.

CARBUNCLE.—A hard, painful, circumscribed tumour, so called from *carbo*, a coal, because the ancients likened the pain it caused to a burning coal in a state of perpetual activity.

Symptoms. — Carbuncle commences with a hard red swelling, which soon becomes of a purple or livid colour; the tumour, as it extends, becomes soft; little pimples form on the skin round the centre mass, which soon breaks into small ulcers, from each of which oozes a thin, irritating discharge. After some days these small ulcers spread, and, uniting, form three or four large suppurating surfaces, from which the discharge becomes thick and tenacious. Carbuncles more frequently attack the old than the young, and most frequently appear at the nape of the neck, on the shoulder-blade, between the shoulders, or on the *nates*, or buttocks. A carbuncle differs from a boil in having no core, and terminating in gangrene, or sloughing, instead of suppuration. Wherever they occur, they indicate a low state of vitality, and a putrescent or typhoid state of the system.

Treatment.—A free and deep incision is to be made across the swelling as soon as it begins to point, from above downwards, and another at right angles, from left to right; after the bleeding, which is often considerable, has ceased, the sore is to be poulticed with linseed meal, or hot bran, till the sloughing has terminated, and the wound begins to heal. During the early poulticing, and till the carbuncle is opened, a compound colocynth pill should be given every second day, and a dose of the following mixture every six hours, with a grain of opium at bed time, if there be great irritation. Take of—

Powdered nitre . . .	2 scruples.
Tartar emetic . . .	4 grains.
Mint water . . .	6 ounces.
Syrup of saffron . .	3 drachms.

Mix. Two tablespoonfuls for a dose: if sickness should succeed, only one spoonful is to be taken. As soon as the incisions have been made, the patient's strength is to be kept up by a full diet of animal food, with stout or wine three times a day. A pill, composed of equal parts of colocynth and blue pill, every second morning, and the following mixture every four hours. Take of—

Quassia bark . . .	1 drachm.
Cardamom seeds . .	2 drachms.
Canella alba bark . .	2 drachms.
Boiling water . . .	1 pint.

Infuse for 6 hours, strain, and add—

Nitric and muriatic acids, of each	30 drops.

Mix: a tablespoonful, with the same of water, to be sucked through a quill every four hours; and at bedtime a pill containing two grains of quinine. These means, with a tepid bath, exercise, and a good diet, will restore tone to the system, cause the healthy granulation of the wound, and probably save the patient from a recurrence of the disease. See Boil.

CARCINOMA. — A hard, glandular swelling, the first stage of cancer, known as scirrhus. See Cancer.

CARDAMOMS.—Grains of Paradise, a highly esteemed warm, aromatic drug or spice, the *Elettaria cardamomum*, belonging to the Natural order *Zingiberaceæ*. There are two kinds of cardamoms in general use—the *lesser* cardamoms, always found in their capsules; and the *larger*, exported loose, and known as the grains of Paradise. These seeds, which are small, hard, and black, are a warm, grateful stimulant and carminative, and only used medicinally to flavour mixtures and infusions, and to prevent griping. They are either given in a powder, in doses of from 5 to 10 grains, or as a tincture, when the quantity of the simple is from 1 to 2 drachms, and of the compound tincture the dose is from 2 to 4 drachms, as a cordial stomachic. The inhabitants of the East eat large quantities of these seeds as stomachics, and also probably, as they do curry, to correct the flatulency of the rice, of which they eat so largely.

CARDIA and CARDIAC. — Words used by anatomists to express the upper portion of the stomach, so named from its neighbourhood to *cardia*, the heart. The *cardiac* opening of the stomach is that constricted portion where the œsophagus or gullet terminates, and by which the food enters the organ. See STOMACH, and AFFECTIONS OF.

CARDITIS.—Inflammation of the heart. See HEART, DISEASES OF.

CARICA PAPAYA.—A long, slender tree, native of South America, called the Papaw Tree; highly esteemed for its milky sap, which is used as a cosmetic and anthelmintic. The fruit is also prized, and when unripe is cooked as a vegetable. The Indians use the bruised leaves to soften the water, and employ them as a soap.

CARIES.—A surgical term, to signify that condition of a bone preceding its absolute death or *necrosis*. Caries is an ulceration or rottenness of a part or the whole of a bone.

CARLSBAD.—A town of Bohemia, and celebrated for possessing a medicinal spring of great virtue. Carlsbad, or Charles's Bath, is the hottest saline spring in Germany. See MINERAL WATERS.

CARMINATIVES.—A class of medicines of a warm, stimulating character, chiefly given to prevent pain or griping in the stomach or bowels, or to allay such when existing, and to dispel flatulence. The list of carminatives is very numerous, and comprises all the aromatic herbs and plants—such as all the mints, thyme, dill, &c.; all the aromatic seeds, from cardamoms to caraway; the whole range of spices, all the essential oils, many of the barks, all the natural balsams, some of the resins and gum-resins—as camphor, galbanum, and assafœtida; and alcohol and opium.

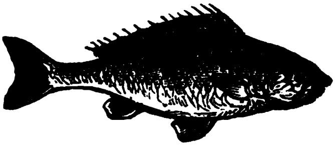
CARMINE.—A beautiful colouring matter, obtained from a solution of cochineal, by precipitating the colouring powder by means of cream of tartar and alum; used with pearl-powder as a cosmetic.

CARNEOUS.—Fleshy; from *caro*, flesh. Hence the word *carnivora*, a class of flesh-eating animals; wild beasts.

CAROTID.—The large artery of the neck; so called from a belief that if pressed upon, so as to impede the circulation in it, the individual would fall asleep. On the right side the carotid is given off from the *arteria innominata*, and on the left it rises immediately from the arch of the aorta. See AORTA, *cut*.

The carotid on either side divides, near the angle of the lower jaw, into the internal and external branches: the first entering the skull, and supplying the two halves or hemispheres of the brain, the eyes, and other parts with their chief source of nourishment; the second being ramified over the neck, cheeks, scalp, and external ear. The carotids, though not the only, are by far the largest arteries supplying the brain with blood; and, as a consequence, when the main trunk of either is divided, as is so frequently the case in determined suicides, the hemorrhage is almost always fatal,—as in that case, before the internal carotid is given off, the brain is not only cut off from the vital fluid, but the head as well. See CIRCULATION THROUGH THE BRAIN, NECK, THROAT, &c.

CARP.—A well-known fresh-water fish, of which there are three varieties—the river, pond, and crucian carp; the first, however, is the fish that for flavour and delicacy of eating is most esteemed. The carp attains to a considerable size, and though from six to nine pounds is the ordinary average of its weight, it not unfrequently attains the extraordinary size of forty pounds. As a light, wholesome article of diet, carp is highly esteemed. See FOOD.



CARP.

CARPUS.—The Latin for "wrist." By this term anatomists understand the series of eight small bones which lie between the hand and forearm, and known as the wrist joint. The names of the several bones, and their uses, will be explained under Wrist, which see.

CARRARA WATER.—An artificial mineral water, named after a town in Italy famous for its beautiful marble and springs. Carrara water is a kind of lime water highly charged with carbonic acid; and, on account of its stimulating effervescence, is much used in cases of severe dyspepsia. See MINERAL WATERS.

CARRON OIL.—An oleaginous mixture, named Carron after the great Scotch iron-works situated on the banks of that river, and where, about sixty years ago, this compound was first used; and, till juster and more scientific views on the nature of burns arose, was considered the best known remedy for burns and scalds. It was kept in large quantities always on the premises, and employed largely over the country, no accident by steam or molten metal being thought too extensive to be treated with this mixture. Carron oil consists of equal parts of linseed oil and lime water, shaken together till the whole assumes the consistency and colour of the broken yolk of an egg. This liniment, spread on linen cloths, was placed on the burnt part, and repeated every hour or two. Cotton, wool, or flour, by excluding the air from the burn, has, however, fortunately long superseded this disagreeable and hurtful mode of practice, and caused Carron oil to be exploded for the treatment of accidents by fire and steam. See Burns.

CARROT.—A well-known and valuable vegetable. The *Daucus sylvestris*, or wild carrot, answers the medicinal purpose to which this vegetable is sometimes put, that of forming a poultice for fœtid ulcers. Formerly the carrot was greatly prized for its diuretic virtues, but has long been exploded from modern practice. As a wholesome and nutritious article of food, when well cooked, the carrot is a vegetable of great importance, owing most of its nutrient qualities to the large quantity of free saccharine matter contained in it. See Food.

CARTILAGE.—A smooth, white, glistening substance, between the ductile elasticity of ligament and the compact solidity of bone, and is that substance popularly known as gristle. There are three kinds of cartilage: that covering the ends of all articulating bones, to protect, and admit friction without injury to the bones themselves; or *articular* cartilages—that variety which lies within the joints and articulations, and named *inter-articular;* and, lastly, that form that answers the purpose of bone in some respects and ligament in others, and called *connecting* cartilage—as those bands which connect the true ribs to the *sternum*, or breast-bone, and the false to the true ribs. The cartilages which form the windpipe, organ of voice, and connect bones together or cover cavities in them, are by some authors regarded as a fourth variety. Cartilage consists of coagulated albumen and a little gelatine; and in all very young animals answers the purpose of bone. As the child or animal advances in age, osseous or bony particles are deposited in layers in the interstices of the cartilage, till in time the gristle is changed into perfect bone. After maturity, and as age advances, the cartilaginous portion of each bone is absorbed, the gelatine being removed, and an excess of albumen and earthy matter left behind: on this account the bones of old people are always more brittle than those of youth or mid-age. If a long bone is boiled for a length of time in a proper vessel, all the cartilaginous properties, or in other words all its albumen and gelatine, will be extracted, and a porous shell, like a honeycomb, extremely light, white, and brittle, and consisting almost entirely of phosphate of lime, will be left behind. If the corresponding bone has been laid for some days in a mixture of muriatic acid and water, all its earthy salts will have been extracted by the acid, and what was the bone when washed will appear like a stick of Indian rubber, which may be bent or twisted in any direction, nothing in fact being left but the original cartilage or gristle.

CARUNCLE LACHRYMALIS.—The name given by anatomists to the little red point of flesh seen in the inner corner (*canthus*) of the eye, and sometimes called *puncta*. The commencement of the tear-duct, by which all the tears are carried, without overflowing the eyelid, into the nose. See Canthus.

CARYOPHYLLUS. — The botanical name of the clove tree. See Cloves.

CASCARILLA BARK, or SEASIDE BALSAM.—A very useful aromatic, bitter bark, the product of the *Croton eleuteria*, belonging to the Natural order *Euphorbiaceæ*, a native of the West Indies. As a warm and grateful bitter, cascarilla may be used alone in the form of infusion, in the dose of three tablespoonfuls three times a day. It is, however, better employed in combination with canella alba, and carbonate of soda or potass, in cases of indigestion, by infusing 2 drachms of each bark and 1 of ginger; the whole bruised in 10 ounces of boiling water, and adding, when cold and strained, half an ounce of carbonate of potass, or 2 drachms of dried carbonate of soda. Of such a mixture, persons affected with weak stomachs may take a tablespoonful four times a day. The powder of the bark is used largely, on account of its aromatic smell, in making pastilles and incense: for the same reason smokers often put a few bits into their pipe. The only preparations of cascarilla are the infusion, powder, and the tincture—*tinctura cascarillæ composita*, the dose of which is from 1 to 2 drachms as a stomachic.

CASEIC ACID, or CASEINE.—The active principle of cheese. The compounds formed with it are chemically called Ca-

seates. The curd of milk is known as the caseous matter. It is the presence of an excess of caseine in old cheese that frequently makes it poisonous to persons of weak stomach.

CASSAVA.—The pith of a plant belonging to the Natural order *Euphorbiaceæ*, used as a farinaceous food. See TAPIOCA.

CASSIA.—The name given to several trees and plants yielding medicinal articles; they all belong to the Natural order *Leguminosæ;* the only substances, however, of any special interest as drugs are the *Cassia cinnamomum* (see CINNAMON), the *Cassia fistula* (pipe or purging cassia), and the *Cassia senna*, which see. The *Cassia fistula* is a long-podded fruit, resembling in size and shape the leather case of a pair of spectacles. The inside of this capsule is divided into cells, and filled with a soft, dark-coloured pulp, like lenitive electuary, and when fresh is scooped out with a spoon, and eaten like a confection. It is cool, pleasant, and in its effect laxative; but if taken in quantity acts violently, like senna or buckthorn. It was formerly in great repute as a cooling, easy purgative, but is now almost obsolete.

CASTILE SOAP.—A hard, beautifully mottled soap, manufactured in Spain, and being made of vegetable oil—that of olives —and soda, has always been used in medicine in the combination of pills. It is only used for this purpose to prevent the pills becoming hard, and insure their speedy solution in the stomach. See SOAP.

CASTOR.—An animal secretion, collected in a small bag or sac in the castor animal, the common beaver, as the musk is in the musk ox of Thibet.

CHARACTER AND PROPERTIES. — The castor is a fibrous-looking substance, in tough dried masses, and has a slightly unctuous, heavy odour, and a warm, bitterish taste. It is used in medicine as a stimulating antispasmodic and emmenagogue, and given in most nervous and spasmodic affections, either in the form of powder or tincture. When employed in the form of powder the dose varies from 5 to 15 grains, and as a tincture in quantities from 1 to 2 drachms. Its action, however, is so uncertain, that it is now only used as an adjunct to others, and not as a substantive article.

CASTOR OIL.—This well-known article is the expressed oil of the seeds of the *Ricinus communis*, or plant known as the *Palma Christi*, appertaining to the Natural order *Euphorbiaceæ*, and is a plant *common to Asia* and America.

PROPERTIES AND USES.—Castor oil is one of the most useful and generally used purgatives employed in medicine, and there are but few diseases in which it may not be given with safety and benefit, both to young and old. Castor oil dissolves in its own bulk of alcohol, and is easily made into an emulsion with eggs or gum, where the stomach will not accept the free oil. A marked peculiarity with this article is, that, unlike other purgatives, which, by repetition, require an increase of the dose, castor oil demands a reduction in the quantity given when repeated, the action by this oil being carried on after the first dose. The dose for infants is from half a teaspoonful to a full teaspoonful, or 1 drachm; for children, from a teaspoonful to a tablespoonful, or from 1 drachm to 4 drachms, or half an ounce; and for an adult, from 1 ounce to 1½ ounces: either taken in a little peppermint or cinnamon water, tea, coffee, or gin, a small piece of orange peel being placed in the mouth to remove the oily sensation.

There are many varieties of castor oil in the market. The West India oil is generally dark brown in colour, more active in its operation, and rank in the taste; this is owing to its mode of preparation, being extracted by great heat. This oil is generally used for cattle. The American is the purest in colour, and every way the most beautiful in appearance, but far behind the others in quality. The best oil in use is the East Indian, or, as it is called, the Cold Drawn. This, however, is generally a mistake, as the seeds seldom yield enough oil by pressure to warrant that process. The mode of procedure is to bruise the seeds well, put them in bags, and throw several into a large copper filled with cold water, and then light a fire in the furnace. As the water becomes warm the oil rises to the surface, is skimmed off, and packed in large leather bottles, holding four or five gallons, called dippers; it is finally filtered through flannel bags, and vended as the best oil. That which rises as the water in the copper boils, is less bright in colour, though equally good, and is known as the Hot Drawn. The oil was formerly obtained by pressure through iron plates, either cold or hot, but economy has long since exploded that process, as being too wasteful.

CATALEPSY.—A disease of a peculiarly nervous and spasmodic character, in which certain parts of the cerebro-spinal system are thrown into a state of profound sleep or coma, while others are preternaturally excited. This is one of the most remarkable diseases in the whole catalogue of physic as a science, and has demanded the most rigid investigation from medical men of all countries.

Causes.—These are, in a great measure, hid in as much obscurity as the pathology of the disease; and can only be at best surmised as depending on some strong emotion of the mind, the presence of some source of internal irritation, and in females on some uterine disturbance.

Symptoms.—These come on suddenly, with a deprivation of all power of motion and sensation, the patient remaining exactly in the position and attitude in which he was first attacked. The chief characteristics of this disease are the rigidity of all the muscles and the passive state of the body, which remains so insensible to pain or inconvenience that the limbs may be bent into any position the physician chooses, and will so remain till altered to some other. This alarming state may last for twenty minutes, or for several hours, and has been known to exist for days, presenting many of the characters of a mesmeric trance.

Treatment.—The mode of treating this disease depends entirely on the age, sex, and temperament of the patient, and also on the causes that may have given rise to it; and may demand bleeding and a course of depletion, or one of tonics and stimulants, or a partial combination of both modes. This will be more fully entered upon under the article Trance, which see.

CATAMENIA.—A medical term derived from the Greek, signifying the duration of a month. The periodical recurrence of the uterine discharge. See Menses and Womb.

CATAPLASM, or CATAPLASMA.—A plaster or poultice: any application, hot or cold, placed on the body, not being liquid, is called, by medical men, a cataplasm. See Poultice.

CATARACT.—A disease of the eye; —blindness; gutta serena; the drop. This disease is known by many popular names, and implies a state of one or both organs, from simple opacity of the eye and impaired vision, to absolute loss of sight. Cataract is a disease of the crystalline lens, that structure which, situated in the centre of the eyeball, receives and transmits to the retina the rays of light taken in by the organ, and consists in an opacity that, commencing at the side, gradually extends over the whole disc, or anterior surface, in the appearance of a white, milky cloud, effectually shutting out the access of all light to the retina. Cataract is always slow of formation, and more frequently attacks persons after the period of maturity than before it.

The causes of this disease of the crystalline lens are often extremely obscure and doubtful. In some cases the tendency to cataract has been shown to be hereditary, by several members of one family being afflicted with it. The more ordinary causes are—some organic mischief in the brain, causing pressure on some of the optic vessels; accidents, blows, long exposure to strong heats and lights, falls, or severe contusions; long-continued functional derangement of the stomach, great constitutional disturbance, and close, minute study.

Symptoms.—Cataract usually comes on most insidiously, and, being unattended with pain, is only indicated by a gradual dimness of sight, not at first regarded as of any moment, till a difficulty to distinguish objects from the side takes place, that slowly increases, and spreads towards the centre or axis of the eye, when objects occasionally appear double, and specks or moats seem to rise before the vision, which the patient, believing to be caused by hairs or bits of down, is repeatedly attempting to remove with the handkerchief or fingers. At length the obscuration is perfect—the other half of the lens being much more rapidly darkened than the first—the crystalline lens appearing of a uniform white or clouded character. Cataract may either attack one or both eyes, and at the same time, or after the complete formation in one, the opacity may commence in the other.

Cataracts are either what are called firm, soft or cheesy, or milky or fluid, according to their texture or characters.

Treatment.—It is only in the earliest stage of this disease that medical treatment has any chance of affording benefit, when by timely cupping the temples, the application of blisters, or the establishment of an issue in the neck, and a course of alterative and tonic medicines, relief may be afforded, and a check put to the further progress of the diseased action. At the same time, all arduous or straining occupation of the eyes must be prohibited, and a strict dietetic system adopted. ' In general, however, it is purely a disease for the surgeon, and which nothing but an operation can cure; and as such an operation is one of extreme delicacy and danger, which no one but an experienced surgeon would undertake, it is unnecessary for us to do more than explain the object of the operation of *couching* the eye. This is simply the removing or breaking of the obstructing medium, and allowing the rays of light (not so condensed as originally) to fall on the retina at the back of the eye. To effect this, it is usual to anoint the brow and eyelid with extract of belladonna before beginning the operation, to induce as great a contraction of the iris as possible, or what is called "dilate the pupil," for the double purpose of keeping that delicate curtain as far as convenient from injury, and at the same time obtain a full view of the part on which the surgeon is about to operate. A small, fine knife is then passed from the side of the ball of the eye up to the lens, when, according to the nature of the diseased structure, the lens is either pulled out by means of a fine kind of *crochet* instrument from the axis of vision, or depressed; or it, and the delicate membrane or capsule in which it is contained, are drawn forward in the *aqueous humour* of the eye, and there being broken up into small pieces, and pushed down among that humour, are left to be absorbed by the lymphatics, and entirely removed, which, after the lapse of a certain time, is certain of being effected; the patient, during those days or weeks, being kept in a darkened room, and under a most careful management as respects diet and medicine.

Couching is not the only operation performed for cataract, but the broad features of that form are sufficient to convey an idea of the nature and objects of an operation for cataract. It is regarded as bad surgery—at least impolitic,—considering the great sympathy existing between the two organs, to perform an operation on one eye while the other is sound, organically and functionally.

CATARRH, or flowing downwards of the humours.—A common cold. A catarrh is a slight inflammatory affection of the lining membrane of the mouth, nostrils, and pharynx, sometimes extending down the gullet behind, and the larynx and windpipe in the front. In the latter and most important form, the disease is called Bronchitis; and when there is a mixture of the two, the result assumes the features of what is called Influenza. As all inflammatory action in a mucous membrane produces a thickening of that structure, a catarrh is always attended with hoarseness, a thickness in the speech, sore throat, or more or less difficulty of swallowing, and when reaction sets in, by a running or discharge from the nose. The exciting cause of all or nearly all of the above forms of catarrhal affection is so seldom noticed, that we are perpetually attributing the effect of the reaction to a symptom of the cause, and in this manner consider the hoarseness and running from the eyes and nose as primary symptoms. See INFLUENZA, and COLD, COMMON.

CATECHU, EXTRACT OF; OR TERRA JAPONICA.—This powerful and useful astringent gum-resin is obtained, in the usual manner of such exudations, from the *Acacia catechu*, a tree native to the East Indies, and belonging to the Natural order *Leguminosæ*.

PROPERTIES AND USES.—Catechu, the gum resin, is of a dark, brownish black colour, in hard, friable masses, soluble in proof spirits, or equal parts of alcohol and water; is inodorous, but has a slightly bitter, and strongly astringent taste. The preparations of catechu are—a powder, *pulvis catechu;* a tincture, *tinctura catechu;* and a semi-liquid extract, called, from its having originally been thought a native Japanese earth or slime, *terra Japonica.*

Catechu has only one action on the living animal fibre, that of an astringent or styptic. An astringent when given internally in powder, extract, or tincture, with or without chalk, in diarrhœa, dysentery, or ordinary relaxation; and as a styptic when used as tincture or powder, to check any sudden bleeding or hemorrhage. The dose of the powder is from 10 to 20 grains, the tincture from 30 drops to 2 drachms, and the extract the same.

An infusion is sometimes made of the catechu as a gargle for relaxed sore throat, and for the hoarseness to which singers and actors are subject from a loose state of the fauces: a small piece of the gum catechu, put in the mouth and sucked, is esteemed by such *artistes* as the most effective of all remedies.

In scorbutic conditions of the gums and mouth, catechu makes an admirable ingredient in tooth-powder. See TOOTH-POWDER.

CATHARTICS.—A class of medicines that exercise a strong action on the bowels, producing large and repeated evacuations. Cathartics are divided into two orders—the moderate and excessive, or the purgative and the drastic. Among the first are senna, jalap, aloes, scammony, castor oil, Epsom salts, glauber salts, calomel, and broom. Among the drastics, the most important are croton oil, elaterium or wild cucumber, gamboge, colocynth, tobacco, buckthorn.

The latter order of cathartics are only employed when a quick and copious action on the bowels is demanded, and when it is necessary to reduce the patient suddenly, as in apoplexy or cases of dropsy, where large and watery evacuations assist in carrying off the collected fluid.

CATHARTINE.—The active principle of senna; a powerful drastic alkaloid, obtained from the seed-pods and leaves of the *Cassia senna.*

CATHETER.—The name of a fistulous surgical instrument, made of different lengths, either of silver or elastic material, and used for the purpose of drawing off the contents of the bladder when the powers of nature are unable to empty the organ, or there is some impediment in the passage, as a stricture, or accidental and temporary pressure, as during labour, when the ordinary channel is obstructed.

Catheters are either what are called male or female, according to the sex on whom used. The former is a long, slightly bent tube, of different sizes as regards diameter, but generally about the circumference of a penholder, the rounded point being perforated with a few holes. As soon as the catheter is inserted into the bladder, the wire, or stilett, is withdrawn, and the water allowed to flow into a basin. The female catheter is much shorter than the male, though otherwise of the same dimensions; but when used in labour or pregnancy, the catheter, instead of being round, should be flat.

CATHOLICON.—A panacea, or universal remedy; an aperient electuary, held in high esteem by the Greek and Arabic physicians, as having the power to expel all pestilent or hurtful humours from the body by its special action on the bowels.

CATLING.—A surgical instrument formerly in use, and called a "dismembering knife;" a short, strong, double-edged, sharp-pointed knife, used by the old surgeons in the second stage of all amputations.

CAUDA EQUINA.—The horse's tail; a name given by anatomists to the termination of the spinal marrow, where it issues in a double series of long, tail-like fibres from the apertures in the back of the os sacrum. See SPINAL MARROW.

CAUDLE.—A soft, warm, nourishing beverage, made of ale or wine, flour or oatmeal, sugar, spices, and *sometimes* spirits; given hot, and specially intended for women in childbed.

CAUL.—The thin skin that covers the bowels is popularly known as the caul, though by anatomists denominated Omentum, which see. It sometimes happens that the child, in hasty labours, is born with one of the fine uterine membranes over the head, in the form of a nightcap. This unusual appendage has been regarded with superstitious veneration by the ignorant; and from the firmly rooted belief that no person can be drowned who possesses such a talisman, infants' cauls have been long esteemed as things remarkably fortunate to the owner, and large sums have been demanded and given for such a presumed preventive to a watery end.

CAULIFLOWER.—A well-known and greatly esteemed vegetable, and which, with artichokes and cabbages, was first planted in England in the reign of Charles II. The cauliflower is a light, easily digested, and nutritious vegetable aliment. See FOOD.

CAUSTICS.—A class of medicines that burn or eat away the skin and flesh, making an open sore. The most important caustics are—the nitrate of silver (*lunar caustic*), caustic potass (*potassa fusa*), nitric acid (*aqua fortis*), sulphate of copper (*bluestone*). See CAUTERY.

CAUTERY.—Any drug, or means employed to produce a violent local inflammation, with the object, by a counter-irritation, of relieving some internal organ or part. Sometimes they are used so strong as to produce instant destruction of the cuticle and flesh, leaving a large suppurating wound. The object is much the same in this as in the other case, only more lasting and extensive, the wound being called an issue. There are two kinds of cauteries—the *actual* and the *potential.* The actual cautery is produced by heat, and can be obtained in three ways: first, by heating a metallic plate in boiling water, and then pressing it firmly on the body till the surface is abraded. The second method is by heating certain shaped irons till they become white, and in that intense state rubbing them along the back, hip, or arm, in the hope of relieving the deep-seated injury in the spine or hip joint, or wherever the disease may be situated. The third mode of employing the actual cautery is by igniting a small flat roll of fine cotton, and while one person retains it on the affected part, another drives the heat through by keeping up a steady draught of air by means of a pair of bellows. For the method of preparing this cautery, see Moxa.

The potential cautery embraces the application of all those articles already noted under Caustics, which see.

CAVA VENA. See Vena Cava.

CAVIARE.—A sauce greatly prized by the epicure, and manufactured in immense quantities on the shores of the Caspian Sea, and along the banks of the Volga. Caviare is prepared from the roe of the sturgeon, which, being first dried in the sun, rubbed through a sieve, salted, and then covered with a fish oil, is firmly compressed, and finally packed for export. As a condiment to languid appetites, caviare is frequently very beneficial. See Food.

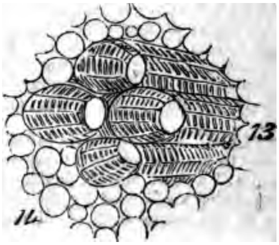
CAYENNE PEPPER.—The article vended as cayenne pepper is a powder of the dried pods of several varieties of the capsicum, and which besides its general purpose of a condiment, is used medicinally as a stomachic and stimulant; but in either case requires to be employed with extreme caution, as it is apt to produce excessive pain in the stomach and bowels. As a stomachic in gouty patients, and in persons of cold and torpid habit of body, about half a grain of cayenne, in combination with aloes and mastich as a dinner pill, is often very beneficial; or it may be administered with rhubarb, soda, and calumba for the same purpose. It is, however, as an external stimulant, in the form of a gargle, that this pepper is most generally used. In malignant sore throat, and that obstinate state of the fauces that so frequently follows scarlet fever, a gargle made of cayenne vinegar, infusion of roses, and tincture of catechu, will be found of eminent advantage. Cayenne is a warm and grateful condiment, and in moderation promotes digestion and prevents flatulence; it is, however, much adulterated with red lead, salt, and brick-dust. The only preparations of this drug kept in the shops are the tincture and the vinegar (*tinctura* and *acetum capsici*).

CEDRON.—The seeds of the *Simaba cedrus;* greatly recommended in the East as a specific for the bites of serpents, and for hydrophobia; given in doses of from 1 to 3 grains.

CELERY.—A well-known aromatic edible vegetable, the *Apina graveolus,* extensively used in the making of soups, *and largely partaken* of at supper and dessert. Celery was formerly much esteemed for its medicinal virtues, and for its special action on the bladder and adjacent organs was held in great repute. It is now, however, expunged from the list of medicines, and only regarded as a refreshing adjunct to cheese. It is neither nutritious nor easy of digestion, and to weak stomachs is unwholesome. The wild celery, especially the root, is extremely poisonous, producing sickness and vomiting, great prostration, a livid countenance, fixed and dilated pupils, deep snorting breathing, heaving of the chest, total insensibility, and a feeble pulse. Sometimes these symptoms are attended with immoderate fits of laughter, and finally by locked jaw. The best remedies are an emetic of white vitriol, with brandy, ether, and ammonia. See Poisons.

CELL.—A small cavity, and a primitive form of all the tissues of the body, each being made up of a series of these minute apertures,—too minute for the naked eye to detect, but which under the microscope appear as large as the cells in a slice of honeycomb. A cell consists of three distinct parts,—a membrane, having a nucleus or small body within it, and a second or still smaller nucleus within that. The tissues from which the several organs and parts of all animals are made up consist entirely of cells: in the same manner, in vegetable life, from the herb to the tree, every part is composed of the same elementary cells.

CELLULAR MEMBRANE.—One of the primary tissues of the body, entering as a constituent element into every solid of the frame. It forms the main constituent of all the bones, their strength and firmness depending upon the earthy



CELLULAR TISSUE IN VEGETABLES.

Showing (13) the parallel direction of the vessels, and (14) the surrounding cellular tissue.

matter deposited in its cells. It forms an enveloping sheath to all the muscles and nerves; it constitutes the bulk of the tendons, ligaments, and cartilages; it enters into the composition of the hair and nails; it unites all the different parts, and fills up all the intervals between them. Indeed, were it possible to remove all the earthy part from the bones, the muscular fibre from the muscles and organs, take away the nerves and fat, and evaporate the fluids from the body, the frame would preserve the same size, but appear composed of one vast and complicated honeycomb of cellular tissue. See Tissues.

CEMENT.—Any lute or loam used to unite retorts and receivers, or connect chemical vessels, usually made with almond or linseed-meal. Also a compound of brickdust and plaster of Paris. Cements used for stopping decayed teeth will be enumerated under the head of Teeth, which see, or Succedaneum.

CENTIGRAMME.—A French weight, of the hundredth part of a *gramme*; equivalent to one-fifth of a grain.

CENTILITRE.—A French measure of capacity; the hundredth part of a *litre*, or a fraction more than six-tenths of a cubic inch.

CENTIMETRE.—A French measure of length; the hundredth part of a *metre*, equivalent to one-third of an English inch.

CEPHALALGIA.—A severe pain in the head; a symptom both of functional and organic disease of the brain, as well as similar affections of the digestive organs. See Headaches.

CEPHALIC.—By this term is understood any medicine which relieves an oppression or disease of the head. Cephalics are either those medicines which act on the head through the constitution, or those which exert a local influence, as snuffs, strong perfumes, such as ammonia, lavender, &c.

CEPHALIC VEIN.—A vein of the arm, and so named from the ancients, who were in the habit of bleeding in that vein for the relief of pains in the head. See cut under Bleeding.

CERA.—Wax; the product of the honey bee. See Wax.

CERAMEN.—A waxy exudation from the ears, thrown out for the double purpose of keeping the external cavity or passage of that organ in a state favourable to healthy hearing, and to exclude insects from invading the channel by its rank and acrid taste.

CERATE.—An external medicament, so called from being made with wax, between the consistence of an ointment and a plaster. A soft ointment, and usually made with oil, or a mixture of oil and lard, such as the simple cerate, or white ointment, and Turner's cerate. See Ointment.

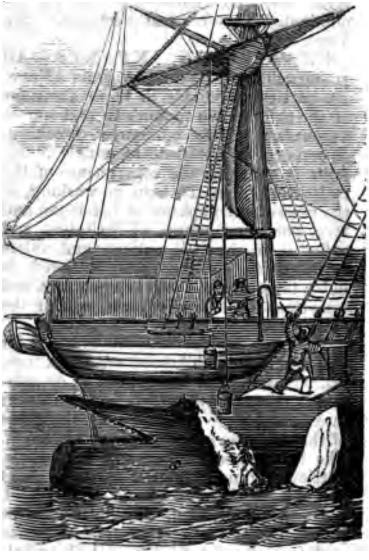
CEREBELLUM.—The posterior or smaller brain, situated at the back of the head.

CEREBRUM. — The brain proper, occupying all the top, sides, and front of the skull. For both, see Brain.

CETACEA. — An order of marine mammalia, including the whale, dolphin, porpoise, &c. See Cetaceum.

CETACEUM.—Spermaceti; a white, fatty substance, of an opaque, crystalline appearance, found in great abundance in an immense cavity in the skull of the cachalot—South Sea or spermaceti whale —the *Physeter macrocephalus*.

The sperm whales congregate in great shoals on the margin of the Antarctic Ocean, where they are hunted for the sake of their valuable oil. When harpooned and dead, the huge animal is secured by



REMOVING THE SPERMACETI FROM THE HEAD OF THE CACHALOT, OR SPERM WHALE.

his tail and head to the bows and stern of the ship, when the great well in the head is opened, and the oil, which during life was fluid, and when dead becomes congealed, is dug out with pick and shovel, and drawn on deck in buckets, and put into casks, being afterwards melted, strained, and purified into the beautiful crystallized substance in which it is found in the shops.

Medical Uses.—Cetaceum is sometimes given internally in the form of an emulsion in cases of coughs, colds, and pulmonary affections, as a demulcent, and expectorant. It also enters into the formation of several ointments and cerates. See Spermaceti.

CERUSE, or CERUSSA.—White lead, or the white oxide of lead. *Cerussa acetata* was a name formerly given to the common acetate of that metal, more generally known as Sugar of Lead, which see.

CERVIX.—The neck. When applied to that part of the body, the front portion is called the *collum*, and the back the *cervix*. The neck of the bladder, or the constricted portion of a bone, is called its cervix, or cervical extremity; in like manner, the seven bones composing the neck are denominated the cervical vertebræ. See Vertebræ.

CHAFING IN INFANTS.—All young children, up to two years of age, are particularly liable to those abrasions of the skin known to mothers and nurses as chafing. This tenderness, cracking, or removal of the delicate cuticle in infants is generally the consequence of the moisture left on the skin in washing, or the pressure of napkins or bandages, and is a perpetual source of irritation and suffering to the little patient, and unless attended to, or the cause removed, is liable to degenerate into an open sore, and sometimes an obstinate ulcer, causing the child intense suffering.

The most popular remedies in vogue for this affection of childhood are burnt rags, fuller's earth, and tutty powder, or calamine. These, however, are but indifferent means, and more apt to fill up the pores of the skin than effect a permanent benefit. The moment any redness of the cuticle, particularly in the folds of the skin about the legs, thighs, and groins of the child, begins to show itself, the fold should be pulled apart, the creases tenderly dried with a strip of soft lint, and the whole carefully dusted with plain violet powder, this process being repeated frequently in *the course of the* day, especially after every time of changing. Should the skin be removed, and the part look red and angry, it may either be lightly wetted with the extract of lead, and afterwards, when dry, dusted with violet powder; or a small lotion made by dissolving a drachm of borax in an ounce of rose water, or else 2 grains of white vitriol in an ounce of elder water. The part is to be washed twice a day with either of these lotions, the violet powder being used after, and continued till the cure is effected. In general, however, the violet powder and the extract of lead will be found sufficient for all ordinary chafing, without resorting to either of the other lotions.

Though the chafing of infants frequently proceeds from neglect in changing the child as often as is necessary; with some children every care and attention on the part of the mother will not prevent this painful and irritating rawness of the infant's body. See Infants, Treatment of.

CHALCEDONY. — A mineral subspecies of quartz, called white agate, and appears in colour like milk and water, with a cloudy blue tinge, with veins, circles, and spots.

It is only used by lapidaries as a gem, and named from a town in Asia, near where it was originally procured, Chalcedon.

CHALK.—*Creta*. A white calcareous earth, soft, but admitting of no polish; it contains a large proportion of carbonic acid, and is a sub-species of carbonate of lime.

This mineral is found in the north of France, Poland, and the Danish islands; but procured in greater abundance in England than in any other country, where it can be traced in immense beds, from Flamborough Head in Yorkshire, through all the eastern and southern counties to Dorset.

Characters. — Chalk is inodorous, insipid in taste, and rough to the feel, but easily pulverized; is hardly at all soluble in water, effervesces with acids of all kinds, and is completely soluble in hydrochloric acid.

Medical Properties and Dose.—Chalk acts on the system as an antacid and absorbent, and has been extensively employed in cases of acidity of the stomach, and particularly in that form of it to which married females are subject, called heartburn. It is also very largely prescribed in cases of relaxation or diarrhœa, depending on the presence some crude or irritating acid in the wels. The principal preparation used medicine is the article known as pre-ured chalk (*creta præparata*), commonly lled "crab's eyes." See LIME. Pre-ured chalk is a *soft* carbonate of lime, marble is a *hard* carbonate of the same rth. As an absorbent, chalk is often ach used as a dentifrice or tooth owder, to absorb the acid that adheres the teeth after meals, and which, if removed, frequently leads to the decay f those organs, by being left to act on he enamel.

CHALK STONES.—Earthy or calcareous concretions deposited in the joints of the fingers and toes, or other parts of the hands and feet, of persons being subject to gout, producing that knotty appearance on those members of the confirmed gouty invalid. Nature frequently relieves the patient of this troublesome deposition by the skin breaking, and numbers of the stones being discharged Many means have been suggested for the absorption of these disfigurements, but hitherto with little success. A course of acid medicines, and the application of friction and stimulating embrocations, are among the most approved remedies; of late, however, large and repeated doses of benzoic acid have been recommended as affording the most certain relief to this inconvenient disfigurement.

CHALYBEATE.—Any medicine into which iron enters. The word is derived from *chalybs*, "iron" or "steel." By chalybeate we generally understand those natural waters in which a certain proportion of iron is held in solution, but which, by exposure to light and air, become slightly discoloured, and throw down their mineral ingredients in the form a red precipitate. The Tunbridge waters are a good example of a chalybeate spring.

Chalybeates act on the system as stimulants and tonics, and are particularly valuable in certain low, debilitated states of the constitution, as in the relaxation following a life of dissipation and pleasure; but are injurious when taken in a plethoric state of the body, or when the pulse is full and the muscular vitality tense.

Any preparation of iron is a chalybeate, whether taken in the form of the precipitated carbonate of iron, the tincture of steel, the sulphate of iron, green vitriol, the wine of iron, or the mineral *chalybeate* waters of England or Scotland. See MINERAL WATERS. All chalybeate waters have a clear, transparent appearance when fresh drawn; an astringent, inky taste; and contain either the carbonate, sulphate, or muriate of iron.

CHAMBER.—A term used by anatomists in describing the ball of the eye, which they divide into two chambers—the anterior, containing the aqueous humour; and the posterior, consisting of the vitreous humour,—the iris hanging like a curtain between the two, and the lens being situated at the back of the first, and in front of the second chamber. See EYE.

CHAMOMILES. See CAMOMILES.

CHAMPAGNE WINE. — Two varieties of this much-esteemed wine are in general use—the one called the sweet or sparkling, the other the dry and still; both, however, being prepared from the same grape, only the fruit for the first is gathered earlier, and that obtained from the sunny side of the vineyard is preferred for the manufacture of the sparkling; while for the still and dry variety the grapes grown in the shade and fully matured are selected. As a light, temporary, and diffusible stimulant, champagne—especially the sparkling variety—is often an article of great benefit to the invalid, as it produces all the benefit of exhilaration of spirits and cheerfulness of mind, without exciting the pulse unduly, or leaving behind the reactionary torpidity produced by common stimulants. It is only when taken in excess, and after repeated use, that those severe headaches, nausea, and lethargic *ennui* are experienced, which have been so justly attributed to this wine. It should be borne in mind that the beautiful flavour—the great characteristic of champagne—can never be appreciated if the wine is drunk while effervescing; and unless taken for the sake of the stimulus of the carbonic acid, it should *not* be drank till the gas has escaped. Good champagne will not be injured by being exposed for hours in a glass; for though it may lose its carbonic acid, its body and flavour will be unimpaired. See WINES.

CHANCRE.—A specific local ulcer. For the nature, character, and treatment, see the one subject to which it appertains under the letter V.

CHAPPED HANDS AND LIPS.—The first of these troublesome complaints is most frequently the result of neglect in *not sufficiently* drying the hands after washing, and exposing them, in a wet or damp state, to the influence of cold winds, and the action of the weather. Sometimes, however, it proceeds from a scrofulous state of the system, or a scorbutic condition of the cuticle. Persons affected by, or liable to, chapped hands, should be particularly careful always to dry them well after washing, and either smear a little honey on the backs of the hands and fingers on removing them from the water, rubbing it well into the cuticle, and then drying them; or they should, after drying them, effectually dust them with violet powder, so as to absorb any adhering moisture, and close the pores. For chaps the result of a scorbutic state, if the honey is not sufficient to restore the skin to a natural smoothness, the following ointment should be rubbed on every night, the hands being afterwards encased in gloves till the morning. Take of—

Citron ointment . . .	1 drachm.
Camphor, powdered .	1 drachm.
White ointment . . .	6 drachms.

Mix.

Chapped Lips.—Though sometimes the result of cold winds, they far more frequently proceed from the state of the stomach and bowels, and can only be cured by taking a few doses of an aperient pill or mixture, and the nightly application of a cerate made by rubbing a drachm of camphor with 2 drachms of white or spermaceti ointment.

CHARCOAL.—Coal made by charring wood: the remains of wood burnt under a structure of earth and turf, and from which all watery and volatile particles have been expelled by the mode of combustion. Charcoal is black, light, brittle, and inodorous, and not being decomposable in air or water, will keep for ages. It is inflammable, gives a strong, steady heat, without smoke, and is both used for culinary purposes and for smelting some of the metals. The finer kind of charcoal, that used for gunpowder, is obtained by the combustion of certain woods in iron cylinders.

Its medicinal properties are those of a disinfectant and antiseptic, and it is used in the state of powder to cover phagedænic sores, and to prevent putrefaction taking place in game. It is also employed in lump as a filter to purify water. There are two kinds of charcoal, vegetable and animal. The first has just been described; the latter is the charcoal of bones, and commonly known as ivory black. See *Carbon* and *Coke*.

CHARM.—A formulary of
posed to act magically when mu
a person suffering from burns
philtres, or characters of occ
which, hung about the neck, c
the body, were supposed to
possessor from the evils of
personal enmity, plague, or
a sort of incantation, by
operator was supposed to have
of depriving any person special
of life, striking him blind, affl
with fits of sickness, or any oth
tune, such as the killing of his
wasting of his stock, &c.

CHARPIE.—Scraped lint, u
dressing of sores, sometimes call

CHEEK.—A side of the face,
from the lower eyelid to the b
jaw, and from the nose and c
or centre line, of the lips to the

CHEESE.—The compressed
milk. This favourite article of c
in a state of health and vigorou
may be eaten in large quantitie
comparative impunity, is a subs
in no form should be given to, o
of, by an invalid, or one with w
tion. A very erroneous idea is e
by many people, that a certain
cheese taken after dinner pro
digestion of the other article
make up the repast,—cheese in
is extremely indigestible, a
toasted, becomes little better tha
dried leather. Any benefit,
that accrues from eating ch
dessert must arise simply fron
contained in it acting as a sti
the stomach. It is on the sam
that the decayed portions of an
are reputed to be beneficial as a
the acid generated by the decay s
the internal coat of the stomac
out a larger quantity of gas
In this manner only can
beneficially.

Because the young of all a
live and obtain their nutriment
caseous matter of milk, or cu
been rashly asserted that che
only digestible in a high degree,
nutritious. The difference, ho
tween the soft curd, or natur
made in the living stomach b
rennet of the gastric juice, and
cially made and compressed cur
nary cheese, when declared fit
as great as between the tender,
of a young ox, and the tough,
hide of the same animal. See

RRIES.—The *Prunus cerasus.*
holesome and, in moderation,
us fruit belongs to the Natural
Rosaceæ. The cherry, though
ised as fruit and an article of diet,
th as a cooling and antiseptic
in certain diseased conditions of
y, especially in scurvy and putrid
Dried cherries are also beneficial
us habits, and torpid conditions of
nach, care being always taken to
wallowing the stones. See Food.

ST (The), or THORAX.—The
portion of the trunk of the body,
l above by the collar-bones and
ing ribs, shut in below by the
gm or midriff, bounded behind by
the spine,—the dorsal vertebræ,—
t by the breast-bone, and on both
y the ribs and their cartilages.
ony case is covered externally by
scles of the ribs, the neck, shoulders,
arms; by the mammary glands in
nale; by cellular tissue and the in-
nts; and finally is supplied with
ves, arteries, veins, and lymphatics
to the several parts. Internally,
est is lined by a delicate serous
ane,—the pleura,—which, like the
eum in the abdomen, envelops every
n the cavity. The chest contains
gs and bronchial tubes, the heart
rta, with the great veins, nerves,
c duct, and the gullet. The chest
corresponds in shape to the size of
gs, and is generally larger in males
males. See Thorax.

ST, PAINS IN THE.—Pains in
rt of the body may proceed from
auses; from blows, accidents, frac-
ibs, or from inflammation of the
or the lungs; from diseases of the
rom water in the chest, and many
causes; or they may arise from
cold, or long and protracted fits of
g. In such cases as the last, the
emedy will be found,—first, to
the feet in hot water (see Bath);
y, to take 10 grains of Dover's
in a little gruel on going to bed,
lf an hour afterwards drinking a
r of egg flip. Should the pains
entirely removed by these means,
them in the same order on the
night.

ST, WATER ON. See Hydro-
x.

STNUT.—This well-known fruit,
stanea vulgaris*, contains an un-
large proportion of starch, and on
ccount, and from the *absence of*
almost all oil, the chestnut is much more wholesome and nutritious than any other kind of edible nut. So highly indeed is it considered on the Continent, that, in the north of Europe, the chestnut forms a large item in the food of the poorer orders of people, who not only roast and boil it as a vegetable, but dry the kernel and reduce it to flour for bread. See Food.

CHICKEN BROTH.—The liquid here indicated is prepared by boiling a young and tender chicken in a quart of water for about forty minutes, when the insipid wash is supposed to be fit for use. This delectable trash physicians were formerly in the habit of ordering their sickly patients to drink, under the mistaken belief that they would thereby benefit their delicate stomachs. So far from doing good, however, it is certain still further to weaken and injure that organ. The only way in which such watery aliment can be rendered beneficial is to boil a few spoonfuls of rice with the chicken, and, by partially thickening the broth, give the stomach something on which it can act, and from which nutriment may be extracted. Whenever a patient's stomach is capable of retaining chicken broth, it will be advisable to throw away that liquor, and serve up the chicken itself to the patient. See Food and Digestion.

CHICKEN POX, SWINE POX, GLAND POX, or GLASS POX, as the disease known to medical men by the name of *Varicella*, is differently called.

Chicken pox is an infectious disease of an inflammatory character, almost peculiar to infancy, or the epoch of early life, and is in all its features and premonitory symptoms so closely allied to small pox as to be frequently confounded with that disease, especially in the mildest form of the latter. The similarity, however, is only in the early symptoms, and it may always be distinguished from small pox by the extreme lightness of all its characters, and the absence of severe constitutional disturbance.

Symptoms.—These commence with the usual chills, lassitude, loss of appetite and sleep that indicate all febrile actions; on the *second* day, an eruption of small red pimples breaks out on the back and shoulders, gradually extending to the neck and face; on the *third* day, these pimples have changed their character, and have become small vesicles, or bladders, filled with a transparent, colourless fluid; on *the fourth* day the eruption has reached maturity, the vesicles are filled, the fluid being sometimes of a light straw colour, after which they burst, and, discharging their contents over the cuticle, a thin scab forms on the top of each pock; the whole being desquamated, or peeled off, by the end of the *fifth* day, without leaving any trace, except in very rare instances, of any mark or pit on the skin.

Chicken pox is distinguished from small pox by the mildness of all the symptoms, the comparative coolness of the body, the absence of the distressing vomiting, and by the pustules discharging *before* suppuration—a process that always follows that stage in small pox,—and by there being no fever before the eruption.

Treatment.—The symptoms are generally so light that but for the eruption the mother would not, in many cases, suspect the presence of a disease, except in very sensitive infants, by the display of more than usual irritability. All that is necessary in the way of medical treatment is a little mild aperient medicine, such as a few spoonfuls of senna and manna tea once a day for two or three times, and when there is much heat of the skin, and hot, dry lips, by putting the child in a tepid bath for a few minutes, and, in addition to the senna tea, giving one of the following powders once or twice. Take of—

Grey powder	3 grains.
Powdered scammony .	4 grains.
Powdered jalap . . .	3 grains.

Mix, and divide into two powders. One of these, after an interval of six hours, may be given to an infant from one to two years of age; one every three hours, if required, to a child from two to four years; and above that age, the two powders, made into one, may be given at once.

CHICORY. — This well-known substance, the powder of the dried roots of the *Cicorium intyblis*, or common chicory, is a native to most parts of Europe, growing under hedges and on waste grounds in every county of England, and now cultivated in large quantities as an article of diet, and also to adulterate coffee. As a member of the family to which dandelion belongs, chicory was formerly highly prized for its medicinal virtues, particularly for its reputed effects on the liver, and its unquestioned diuretic properties. It is not now, however, used for any medical purpose, being confined exclusively for adulterating coffee,—some interested persons having so extolled its *supposed* nutritive and stomachic qualities, that it will take years to expose the imposition. It is bad enough to have t submit to so gross an impurity in ou most grateful beverage; but when that impurity itself is adulterated with bullock' liver and other disgusting compounds, th injury to the stomach, if not to th general health, becomes a matter o serious import, which it is every one' duty to denounce, by repudiating the us of chicory *in toto*.

CHIGOES.—The name of a species o disgusting parasitical sand-flea, commo to the West Indies, and which to the European forms one of the most intolerable plagues of those latitudes. This insidious insect inserts itself under the nails of the toes, into cracks and abrasions of the skin, and there, unsuspected for a time, and burrowing, forms for itself a home in the shape of a small bag or sac, in which it rapidly deposits some thousands of minute eggs, which, fostered by the warmth and blood of the unconscious victim, develop with astonishing quickness, when the whole colony make themselves quickly and painfully felt, destroying the cuticle, all the subjacent cellular texture, and producing a large and offensive ulcer. As soon as this is effected, the chigoes part company, and each individual hurries away to establish a home for itself, till the victim, unless great care is taken, is covered with hundreds of these disgusting nests of parasites. Extreme care must be taken, by keeping the nails of the toes so cut as to prevent these insects from burrowing and committing their depredations unsuspected till the mischief is accomplished.

The only remedy for this disgusting evil is removing the sac before it breaks and lets loose its living horde. The negroes are extremely expert at this operation, and to them must the sufferer appeal for relief.

CHILBLAINS. — A painful inflammatory affection of the skin, chiefly affecting parts remote from the centre of circulation, as at the extremities, or where the vitality is naturally low, such as the joints of the fingers and toes, and backs of the hands.

Chilblains generally attack persons of weak and languid constitutions rather than the robust and active, and extreme youth and old age in preference to mid life.

Cause. — Any sudden and extreme change of temperature, particularl ransitions from cold and moisture to a trong, dry heat. The habit of some ersons keeping their feet always encased n flannel or fur also tends, upon the lightest change of temperature, to induce them. Servant girls and scullery maids are liable to chilblains on the hands and elbows from changes of hot and cold water, and a neglect in drying both properly. Chilblains are divided into the simple and the open.

SYMPTOMS. — These commence with heat, pain, and redness in the part, attended from the first with a constant itching, compelling an amount of scratching which both adds to the pain and extent of the inflammation. The *swelling*, however, which usually characterizes inflammatory action is always *very slight* in this form of cutaneous inflammation. If neglected, the chilblain passes from this, its *simple* form, into the second stage, or the *broken* chilblain. This stage is indicated by an increased itching and redness, which gradually deepens till the part assumes a dark purple colour; a marked alteration taking place in the swelling, which now sensibly enlarges, while small pustules or bladders, which in time burst, discharging a thin, watery exudation, break out, till the skin over the whole part is involved, abraded, and a large suppurating ulcer established in the tissue beneath.

TREATMENT. — Hot turpentine and lotions have been prescribed as a remedy in the first stage of this disease; but the only application that will be found necessary is a piece of lint, well soaked in pure extract of lead, applied every hour for a few times, securing the dressing by a piece of oilskin, till the inflammation is subdued, which will usually be effected in a few hours. The part is afterwards to be rubbed with the hand to re-establish the circulation, and a natural warmth maintained by a dry glove or woollen sock. When, from neglect, the chilblain runs into the open sore, or broken chilblain, the treatment must commence with a warm bran or bread poultice, followed, after an hour or two's poulticing, by the application of the extract of lead on lint, as already directed, over which another poultice is to be placed, and this treatment continued for 20 or 30 hours, after which time the simple lead dressing will be the only application necessary. In cases of scrofulous children the chilblain becomes so deep-seated and obstinate, that it is *sometimes necessary* to send the patient for change of air, and stimulate the ulcer by a lotion of spirits and water, or one of bluestone. The cases, however, are rare where the above simple mode of treating both forms of the disease need be in any way interfered with. See FROSTBITE.

CHILDREN, DISEASES OF.—The attention of mothers cannot be too early called to the fact that each stage in the growth of children, from infancy up to youth, is liable to diseases and ailments peculiar, or to a certain extent so, to their age, and that according to the negligence or care bestowed on their moral and physical health and training as children, and emphatically while under the responsible tuition of their mothers, will depend much of the intellectual virtue or depravity, and the bodily strength or debility, on which the future happiness or misery of the grown man or woman will depend. Of these maternal duties we shall have more to say when we come to the subject appertaining to Mothers; at present we have to do with childhood.

All children, from their extremely delicate organization, are more susceptible of changes of heat and cold than adults, and at the same time are much sooner influenced by medicine, and more easily depressed, than the fully matured; but on the other hand, they rally much quicker from all depressing influences. On account of these facts, children should always be well and amply clothed; not according to the vanity or caprice of their parents (who, from the idea that plenty of air admitted to the emaciated limbs of their children is conducive to their growth, dress them like young Highlanders in the depth of winter), but, according to the severity or mildness of the season, in befitting apparel. Again, all strong or drastic drugs should be withheld from children,—such as elaterium, Croton oil, Epsom salts, gamboge, and, in fact, all violent purgative medicines. Another fact connected with this subject is, that nearly all the affections of childhood take their origin from, or are dependent on, some mischief in the stomach or bowels: this truth must be familiar to all mothers, who cannot fail to have noticed the almost magical improvement which will take place in a young child from the operation of a simple aperient powder, when, an hour before, the symptoms threatened most serious consequences. The information obtained from this fact is, that though violent purgatives are injurious in childhood, *mild* aperient medicines are hardly ever out of place with young patients, and will often ward off, if not cure—when given in time—a serious disease. Equally inadmissible in childhood are stimulants; the natural vivacity of children rendering wines and spirits—except in rare and peculiar cases—most injurious; air, exercise, and a sufficiency of wholesome food, being the only stimulants ever required by children. We have already said that each stage of juvenile life is more or less subject to its own class of ailments; thus, in early infancy we find red gum, thrush, and diarrhœa; from the sixth to the eighteenth month the many affections springing from teething show themselves, infantile remittent fever, and inflammation of the lungs. From two to seven years, the more particularly infantile diseases are developed, as glass pox, scarlet fever, measles, croup, hooping cough, mumps, worms, and that train of evils attending the presence of those parasites; mesenteric disease, and water on the head, with other minor maladies.

For the history and treatment of each disease mentioned, consult the article under its proper name.

CHILLS.—*Cold* chills, as these rigours of the body are popularly but incorrectly denominated, form but one link in that chain of symptoms which makes up the symptomatic history of all fevers. It sometimes, however, happens that these chills are the most frequent and noticeable characters of the threatened disease; and as the subduing of them will not only break the chain of morbid actions, and so ward off the threatened attack, the person should immediately take a warm bath, give the body a good rubbing with a rough towel, and take an aperient pill, with a basin of warm gruel on going to bed, as soon after the bath as possible.

CHIRAGRA.—A Greek word, signifying a seizure of the hand, as in gout; an almost obsolete name for gout in the hand, as *podagra* is for the same disease in the foot. See Gout.

CHIROPODIST.—An operator on corns; one who cuts or removes those callosities. See Corns.

CHIRURGEON.—A pedantic name, derived from the Greek, and taken from the Latin *chirurgus*, a surgeon, and formerly applied as a distinctive mark to those barbers who had obtained a reputation for their skill in surgery.

CHLORIDE.—Any salt containing chlorine or muriatic acid, and formerly *called a muriate;* thus, the chloride of
calcium, chloride of sodium, and c
of mercury, were, till a few years
known as the muriate of lime, mur
soda—common salt, and muriate o
cury—calomel. See Lime, Salt,
cury.

CHLORIDE OF LIME.—This
of the most convenient and useful
our antiseptic and disinfecting a
and is, if not unrivalled, not sur
by any other article of like properti
its power of destroying putrid and
sive odours, from whatever caus
duced; and as a means of purifyi
atmosphere in sick-rooms, hospital
sinks and drains, is equal, in the com
ness of its effect, to the best disinf
fluid yet discovered.

Besides its uses in the sick-room, i
fying the air contaminated with t
exhalations, and its value in the sc
in destroying the smells from cabbage
and drains, chloride of lime ma
valuable antiseptic lotion for off
sores, sloughing ulcers, and cases o
grene; while as an antidote in pois
with prussic acid, when thrown in
stomach in a weak solution by the sto
pump, its virtues are highly valuabl

In braving the danger attendin
entrance of sewers, long-closed cell
vaults, or descending wells to rescu
sons overcome by carbonic acid ga
chloride of lime is the best protectio
which a person can be armed. Fo
purpose, all that is necessary is to
silk handkerchief in a solution o
chloride of lime, and squeezing ou
excess of moisture, tie it across the n
breathing entirely through the wet n
The manner of using chloride of lim
dissolve from one to two tablespoonf
the powder in a pint of cold wate
strength of the solution depending
severity of the cause—and occasi
to sprinkle the sick-room with the liqu
a towel may be dipped in the mi
and then hung across a string i
middle or at each end of the apart
For purifying drains, or the fœtid air
through the trap of the sink, a strong
tion can either be poured down the
pipe at once, or a few spoonfuls
dry chloride may be placed in the
allowing the slops emptied on it to
the powder down with them. See
fecting Fluids. The clothes re
from a patient labouring under any
tious disease, such us typhus, smal
&c., should immediately, on being
off the body, be plunged in a large

containing a solution of chloride
and allowed to remain so immersed
hours before being washed. In
death, the room where the body is
ould be daily sprinkled with the
, or one or two basins of the solu-
y be placed in the room; and
utrefaction has set in, as on the
the corpse, and it is required to
body some days longer unburied, a
oaked in chloride of lime and laid
e face, will destroy any smell, and
he progress of any further decay
eatures.

ORINE.—From *chloros*, green;
nd elementary principle, of a pale
olour, obtained by decomposing the
le of manganese by means of mu-
cid.

ine gas is incombustible, has a
pungent, and peculiar smell, and
es the power of destroying all
in animal and vegetable substances,
tralizing the effluvia from all de-
refuse. On account of its
effect on colour, chlorine has
een employed as the base of all the
tions used in bleaching. Chlorine,
ed into the lungs, proves an imme-
oison. In chemistry, it enters into
ation with the other gases, and
products of many kinds and pro-
the principal of which, however,
chlorides, or muriates.

LOROFORM.—An important
of modern discovery, by which
the worst enemies to the ease and
of man—pain—has, in a measure,
nquished.

oform is a clear, colourless fluid,
leasant, odoriferous smell, and a
pungent taste. Though one of the
uable drugs we possess, and the
portant discovery, as far as hu-
is concerned, that modern science
hieved, there is so much risk at-
g its exhibition, that without the
n of a medical man it ought never
mployed.

pasmodic affections of the chest,
s asthma, and neuralgic diseases,
othache, chloroform is occasionally
nternally, in doses of from 5 to 10
The only case in which we would
its employment, unless under the
a medical man, would be in tooth-
hen 4 or 5 drops, on a piece of fine
may be closed upon, or put into, the
See Ether.

LOROSIS.—A disease of the uterine
s. See Womb, Diseases of.

CHOCOLATE.—This well-known article, used so extensively as a beverage, is manufactured from the roasted beans of the *cacao* plant, and afterwards made into a paste by long trituration in a heated mortar, with sugar, vanilla, and cinnamon; it is then poured into moulds, and left to dry or harden. Chocolate is said to possess a peculiar, nitrogenised principle, partaking of the active alkaloid of both tea and coffee—*theine* and *caffeine;* and on this account, and from the presence of sugar, it is, to a certain extent, nutritious, as well as being a grateful and stomachic beverage. From the addition of vanilla, and an astringent property in itself, chocolate acts in that manner on the system, and in weak, relaxed constitutions, makes a most suitable beverage, by its binding effects on the bowels.

CHOKE DAMP.—The name given by miners and colliers to the carbonic acid sometimes found in mines, and which instantly destroys both the life of the workmen and the lights by which they work. See Carbonic Acid, and Damp.

CHOKING.—This is a misfortune that hungry persons and hasty eaters are very liable to be attacked with; and as the accident is instantaneous, and the individual himself unable to explain the cause of his alarming and often convulsive movements, the situation is one of extreme terror and apprehension to all who witness it, as, in their ignorance of the cause, the contortions of the sufferer are often mistaken for an approaching fit, and much valuable time is consequently lost in sending for that aid which the bystanders might themselves have rendered.

To understand how it is that a man's life may be sacrificed in *three minutes* by the stoppage of a small piece of meat in a tube as large in calibre as a small gas main, it is necessary to apprise the reader of the anatomy of the throat,—at least, so much of it as will enable him to comprehend the nature of the case,—a more ample account being given under the head of the Windpipe and the Gullet.

The gullet, the hollow membranous tube that commences at the back of the mouth, or *fauces*, and which, running down in front of the spine, terminates in the stomach, is composed of several sets of muscular fibres—some *transverse*, or across; others *perpendicular;* and some, again, running *obliquely;* each of these sets of fibres having an action *distinct;* and according to the direction of its line of filaments: the *whole, when acting together and harmoniously*, grasp each mouthful of food that enters the tube, and, by a sequent and systematic action, force, by a contraction of the different fibres, the food downward into the stomach. Sometimes, however, these three sets of muscles are seized with spasm; the transverse, or circular set, for instance, become in one part violently contracted, drawing the gullet together like an hour-glass, and consequently preventing the passage of any substance downwards, and causing a hard, unresisting lump, which presses on that part of the windpipe which is *without* rings, and lies just in front of the gullet, preventing, by the pressure it keeps up, the access of all air to the lungs, and thus as effectually *choking* the person as if he had suffered the Spanish punishment of the garotte.

Choking either takes place at the entrance of the gullet—that is, at the root of the tongue, immediately behind the fauces—or it occurs some distance down the tube. The first situation, though more easily reached, is, nevertheless, infinitely more dangerous as respects consequences.

TREATMENT.—It is quite unnecessary to describe the symptoms of choking. The gurgling noise made by the sufferer, his peculiar expression of features, and the indicative motions of his fingers, will always express the nature of the danger threatened; and according as the fingers are pressed on the root of the tongue, or lower down on the gullet, are we apprised of the point of pressure, and, to a certain extent, guided in the mode of treatment necessary.

When the piece of meat, potato, or cabbage stalk—or whatever the obstruction may be—is lodged at the back of the tongue, behind the fauces, and at the entrance of the gullet, if a pair of small pincers (*forceps*) or a pair of curling-tongs are at hand, they should be instantly used, and the obstructing matter firmly grasped by them and pulled out; but if such articles are not to be obtained, and as each instant's delay is of vital consequence to the choking man, a quill, piece of whalebone, or a *penholder* should be instantly used as a probang, and the article pushed down into the gullet. If, from the size of the obstruction and the spasm of the part, it is impossible to dislodge the impacted mass, the finger *or a feather must be* used to excite vomiting, by pressing down the ton
tickling the back of the mouth,
induce a sudden retching,—the ob
being usually expelled in the viole
made to vomit. As moments, i
case, are of the value of hours
situations, and as the person m
in a few minutes if not relie
utmost expedition should be ad
accidents of this nature; and i
pincers, curling-irons, pen, nor fe
be procured, the fingers must be
and alone, or with the handle of
an effort made to grasp or push d
obstruction, or, by depressing the
induce the patient to vomit: bu
all these means fail to remove the
a basin of cold water must be
abruptly in the person's face, t
modic gasp made in consequenc
application often expelling the s
till then firmly imprisoned.

When the obstruction is low
and the article has been grasp
muscular spasm of the gullet, t
tion is generally accurately indi
the involuntary fingers of the
himself. In this case, one or t
and rapid blows between the s
are often all that is necessary to
the constriction: should it not
however, cold water poured d
spine, or dashed in the face,
most cases, effect it,—pressing d
tongue, or tickling the throat
feather, being resorted to in
cases, when other means have
ineffectual. Even with every
ness and despatch, the patient n
fallen to the ground and be s
dead before the substance has be
from the throat: it must not,
be assumed *for certain* that d
taken place; probably it is at f
a case of suspended animation,
for the usual remedies in such a c
such as dashing cold water on t
and face, the application of am
the nostrils, friction along th
inflating the lungs by means of
or the use, if possible, of electrici
SUSPENDED ANIMATION, ASPHY

CHOLERA MORBUS, OR EN
CHOLERA.—Under this name i
stood a disease very prevalent
country about the autumn of e
summer, and generally found to
severe and universal when the
varieties of the plum fruit are in ab
this form of the disease dependi
or less, on biliary or abdominal

d being local in its action, is,
th endemic and epidemic, neither
s nor infectious.

.—The sudden application of
heated body; the presence of
igestible matter in the stomach,
e skins of gooseberries, cherries,
fruits, or an excess of acid, from
too freely of fruit, especially
perfectly ripe; exposure to the
t air, especially after a sultry
ny thing or cause that may dis-
iliary system. The only diseases
ch cholera morbus can be con-
re those of cholera proper and
; from the latter, however, it is
istinguished by the evacuations
rely bilious, while in dysentery
mucous, mixed with blood and
tter. Cold sweats, hiccough,
reathing, and convulsions, indi-
fatal termination; while an
warmth, ease from pain, a moist
nd sleep, prognosticate a favour-
t.

OMS.—These always commence
asiness in the stomach, nausea
iting, flatulence, severe griping
he bowels, followed soon after by
iliary evacuations, and after a
he vomiting of bile. The pains
antime extend both in circum-
nd downwards, spreading to the
thighs with all the virulence of
acking the patient with acute
from the spasmodic contraction of
les. There is also great heat,
st, and a small, weak, fluttering
hen the disease is very severe,
ce becomes cold, the strength
inks, a clammy sweat breaks out
dy, the face assumes a cadaverous,
e, hiccough supervenes, and a
pse terminates the brief struggle.

MENT.—One of the great sources
and exhaustion in this and all
iseases, is the straining caused by
, and the small quantity and
acridity of the bile ejected, which
burns and irritates the mouth,
nd fauces, but excoriates the
nd anus when discharged by the

irst duty of the surgeon, then,
e to *dilute*, as far as possible,
p nature of the bile, and not only
e vomiting *easier*, but the evacua-
s *hot and painful*. This benefit
ffected in a great measure by pre-
everal quarts of linseed tea, in which
nces of gum arabic have been dissolved, and letting the patient drink freely of the mixture, so as to give the stomach not only plenty of liquid to expel, and thereby at once reduce the suffering caused by straining, but so weaken the acridity of the bile, that whether expelled by the mouth or bowels, it will have less power to irritate and disturb the system.

The next duty is, to put the patient into a warm bath for five minutes, and afterwards apply bottles of hot water to the legs, thighs, and feet, and cover the abdomen with a double fold of flannel, wrung out of a hot decoction, made by boiling camomile flowers, poppy heads, and hemlock, in water, and adding half an ounce of turpentine to each pint of the fomentation. This flannel, dipped in a fresh quantity of the fomentation, is to be *re-applied* as often as it becomes cool, and put on as hot as the patient can bear it.

These measures having been effected, a suppository (see SUPPOSITORY), made by mixing 4 grains of powdered opium with a little extract of dandelion, or any other soft medium, and rolled out in the shape of a short cylinder, is to be smeared with lard or oil, and passed as high up the fundament as it can be forced, and then left to dissolve. One of the following pills is to be given every one, two, or three hours, according to the severity ot the attack, and if the retching continues distressing, an effervescing draught is to be taken every hour. Take of—

Powdered camphor . .	6 grains.
Powdered opium . .	6 grains.
Calomel	12 grains.
Extract of dandelion .	enough to

make into a mass, which is to be divided into six pills.

Effervescing draughts are made by dissolving 10 grains of carbonate of soda and 10 grains of tartaric acid separately in two wineglasses of water, pouring the contents of both into a tumbler, and giving the patient the draught to drink while effervescing.

When the attack is attended with great depression, and a state of collapse is feared, doses of the following mixture are to be given every three or four hours, in the hope of keeping up the powers of the system. Take of—

Carbonate of ammonia	1 drachm;
Or, Spirits of sal volatile	2 drachms.
Camphor mixture . .	5½ ounces.
Laudanum	2 drachms.
Sulphuric ether . . .	1½ drachms.

Mix: two tablespoonfuls to be given for a dose every two, three, or four hours, according to the urgency of the symptoms and the amount of depression experienced.

Great care must be taken in the diet given to the patient, and that nothing crude or hard of digestion enters the stomach: thickened broths, farinaceous foods, and such like articles, should be selected for the dietary. Where temporary exhaustion occurs, a dessertspoonful, or half an ounce, of the aromatic tincture, with the same quantity of brandy, should be given occasionally, and about eighteen or twenty hours after the abatement of the attack, a dose of from 6 to 8 drachms of castor oil, to carry off the remains of bile existing in the bowels, repeating the dose in a couple of days if necessary.

In many cases of English cholera, a dose of castor oil, with 25 drops of laudanum, in peppermint water, if taken in the first instance, will completely carry off the disease, and, after a few hours, restore the patient to his usual health; but to effect this, the oil and laudanum should be taken *immediately* on the appearance of the first symptoms.

Should the action of the bowels expel the suppository ordered, another should be employed as soon after as possible.

CHOLERA, ASIATIC.—Pestilential, Epidemic, Malignant, or Blue Cholera.

It may not be uninteresting to our readers if, before entering on the pathology and treatment of this, the most fearful scourge which has assailed mankind for the last two centuries, we give a brief abstract of its rise and progress through the world during the last half-century, though to suppose that cholera had never shown itself before 1817 would be to assume what is neither probable nor possible; for, like the plagues, black vomit, and sweating sicknesses of European history in the Middle Ages, there can be little doubt that cholera, under a now-forgotten name, or imperfectly described, was formerly, like the other dread visitations, an occasional scourge to man in some locality where circumstances favourable to its development existed; and as ignorance, dirt, poverty, and mental and bodily debasement, have existed in all ages, our experience teaches us to know for a fact that the same causes will always produce like effects.

HISTORY.—In the year 1817, the disease called cholera first made its appearance in the heart of a large city in India,—Jessore, a town in the presidency of Bengal, situated on the southern side of the Sunderbunds, *or the Delta of the* Ganges, a vast tract of marsh, swamp, and wood, intersected i every direction by brackish streams o water, back streams and off-shoots from the main branches of the Ganges. Thi pestilential region, festering like a hideous ulcer under a scorching sun, and giving off a perpetual malaria fatal to human life, had been for ages resigned to tigers and crocodiles, who then, as now, infested it in thousands.

Jessore, built on the outer border of the dismal swamp, and always exposed to the noxious exhalations wafting from these corrupting marshes, seems a place admirably situated to form the nucleus of some deadly pestilence; and here the new disease, as it was called, first appeared after the rainy season of 1817. From Jessore, in a few months, it spread in three lines; one going westward, along the Ganges, as far as the then kingdom of Oude, or over the entire province of Bengal, where it paused for a season in that direction. Another stream of the pestilence at the same time turned south, and in the course of twelve months visited every part of the vast peninsula of Hindostan. On the east, a third stream meeting with more favourable material advanced without check or interruption through the Burmese empire, Siam, and Malacca, and by the end of three years had spread its ravages to the farthest limits of China, and soon after visited all the islands of the Indian Ocean.

In 1823 it again appeared in the north of India, near where the first stream had died out, and spreading west, divided into two streams: the northern current invaded Cabul, Astrachan, and the Russian provinces around the Caspian; while the southern carried its ravages through Persia, Arabia, and Syria, to the borders of the Mediterranean.

In 1829 it crossed the Don and the Ural mountains in one broad tract, and invaded Europe, and, spreading across Russia, in 1830 fixed itself with fearful intensity at Moscow and St. Petersburg. The following year, advancing again, it ravaged Poland, Austria, Bohemia, Hungary, Prussia, and Hanover, finally reaching Hamburgh. In the October of 1831, the pestilence declared itself in Sunderland, and keeping its destructive course, had, in 1832, invaded both London and Paris. Nothing seemed to check the westward progress of the disease, for it had, in Ireland, reached the borders of the Atlantic. This barrier, in 1833, however, was also passed, and cholera raged in Canada, the

ates, and the West India Islands,
; two years later to France, Por-
d Spain, and in 1837 made its
ce at Naples and Rome, when,
usted with its travel, the disease
ied out, for with only occasional
alarm, and a few isolated cases,
ly pestilence seems to have ex-
s virulence, and expired; though
es no sage to assure us, that the
ich once produced the disease, and
t on its deadly course, can, and
ny time, become the propagators
and equally fatal scourge.
he black vomit of the eleventh cen-
e most awful pestilence in the an-
e world, having destroyed, it is sup-
e fourth of the human race in a few
othing has been so terrible in its
y as cholera, which, between 1817
final disappearance at Naples in
estimated to have destroyed fifty
of human beings. One peculiarity
served in the epidemic is that it
her affected by heat nor cold, raging
y in the snows of Siberia as on the
ns of Hindostan.
s.—After the multiplicity of works
n this disease by the most learned
tical men in all parts of the world,
numerous theories that have been
ard to explain this part of the
we are without any positive and
information on the inquiry, the
f cholera being still, if not a
an open question. By some it
attributed to foul and noxious
drainage, impure water, to subtle
terious agents floating in the at-
e and imbibed into the lungs;
; bad or diseased rice or potatoes;
hers have attributed it to meteoric

Nor does uncertainty end here,
uestion whether the disease is in-
or not is still undecided; nor,
are medical men yet certain in
rts of the body the choleraic
first manifests itself. The most
ry information which science has
l is, that those persons who live
l regularly, are cleanly, properly
and, with a cheerful mind, avoid
itudes of weather, are much more
escape the disease than those who
rently provided, or less careful.
after all, but a small amount of
ion to gain after the combined
ce acquired from a disease in
ore than *half* of those attacked

roms.—Asiatic cholera *is divided* into three stages; first, the Premonitory Stage; second, Stage of Collapse; and third, Reactionary Stage.

First Stage.—This stage is sometimes extremely brief, all the symptoms occurring in one or four hours: sometimes, however, they are diffused over several days. A slight giddiness, with a sense of oppression, generally commences the attack; the patient often becomes extremely sensitive, a mere trifle frequently provoking hilarity or depression. The first observable symptom is a pain about the navel; this is followed by tremors in the limbs, a rumbling noise in the bowels; nausea succeeds, and then vomiting; the bowels become loose with frequent, and at first almost natural evacuations. Pains in the head succeed, with thirst, at first moderate, but soon becoming excessive, as the relaxation increases; twitching pains fly about the limbs and breast, which soon settle into painful cramps, particularly of the feet and legs. The vomiting and purging having continued till only a little saliva is thrown from the stomach, and a rice-coloured water expelled from the bowels, shows that all the bile has been discharged from the system, and that the liquid now passing is the *serum*, or watery part of the blood, the patient becoming so exhausted as almost to be unable to move, while his voice sinks to a scarcely audible whisper.

Second Stage, or that of Collapse, is that period when all the vital powers give way, and, all evacuations having ceased, nature is succumbing before the potency of the disease. Severe pain is experienced at the pit of the stomach, and the flying cramps felt towards the end of the last stage are now succeeded by intolerable spasms of the arms, belly, and legs, the muscular fibres being drawn up into rigid knots. An intense thirst arises, which no amount of drink seems to slake. The extremities, and finally the whole body, even to the mouth and tongue, become cold; the cuticle everywhere is either deadly pale, or assumes a livid or a purple hue, or is covered with a clammy sweat, sometimes looking as if the body had been stained with indigo; the fingers are drawn up, shrivelled, and bent on the palm; the pulse sinks, and is imperceptible, and even the expired breath or the patient is cold. The temples are hollow, the eyes sunken, the white of the balls is suffused with red or yellow lines, and the voice is reduced to a tremulous *whisper;* and just before death, the patient either declares himself better, or a sudden spasm arrests his life and breath.

When it is possible to bridge over this most trying period of the disease by judicious treatment, the last and *Third Stage, or that of Reaction*, sets in. This, though a reactionary step in the disease, in which nature is attempting to throw off its deadly burden, and work out a healthy change, is often attended with all the violent symptoms of typhoid disease; and, indeed, with such energy is it carried on, that the weakened system, unable to bear its violence, succumbs before its kindly offices, and death ensues in the midst of nature's efforts to give life.

The third stage commences with a hot, inflamed state of the eyes, acute pain in the head, attended with a drowsiness that becomes lethargic, followed by stertorous breathing and suffusion of face that for a time appears like one in apoplexy, the sleep being often so profound that no noise can rouse the patient to momentary consciousness; at the same time the skin becomes hot, dry, and rough, while a white, chalky coat covers the tongue and mouth.

The time that each of these stages may last is quite uncertain: sometimes one runs so rapidly into the other that no definite demarcation can be detected, the disease from first to last only occupying, when fatal, a very few hours; in others, each stage on the mortal journey is well and broadly defined.

We have already said that medical authorities are still undecided *where* this disease first begins its chain of morbid actions on the frame, and, indeed, are far from certain on any point of consequence connected with it. The College of Physicians, it is true, have declared it to be contagious, but disbelieve it to be in any way infectious. See INFECTION.

The peculiarities of this disease are the inoffensive rice-watery evacuations, the shrivelled and contracted appearance of the body, the suppression of the urine, the cold, tremulous voice, and the livid character or unnatural blueness of the skin: these, the later symptoms of the disease, point out its speciality. The earlier symptoms of biliary evacuations, cramps, and spasms, may belong to cholera morbus, or other conditions of abdominal disease, but these appertain only to Asiatic or malignant cholera.

TREATMENT.—After the immense experience had in this disease, it is a remarkable fact that as much uncertainty *exists as to the best* mode of treating cholera as there is doubt with regard to its pathology, cause, or the part primarily attacked; and though many theories have been advanced as offering scientific grounds for each practitioner to go upon, the disease has presented so many varieties that the mode of cure has, after half a century's experience, resolved itself into what is called a symptomatic mode of treatment; thus every medical man prescribes for such of the symptoms as, at the time, present to his mind a tangible form of disease.

If every stage of cholera was well defined, and had an hour or two of demarcation between each, this mode of treatment would not be—apart from its want of scientific unity—a subject so opposed to common sense; but wanting that, and being so frequently extremely rapid, the prescribing for symptoms as they rise is far from the right or proper course of procedure in such a malignant disease.

It is not till the stage of collapse arises that we are in all cases informed of the fearful nature of the disease, especially when it comes on in isolated cases. In that stage, the disease, having by vomiting and purging carried from the body all the contents of the stomach and bowels, exhausted the gall-bladder and the other secretions, and left the system literally empty, while the power of expulsion is unabated, begins to act on the vital fluid, the blood, and, separating the serum or whey from the circulation (see BLOOD), continues expelling from the bowels the most necessary property of the blood, the principle of its fluidity, in the form of what is called rice-water evacuations, till at length the vital fluid, made too thick to circulate, glides through or blocks up the vessels of the body like pitch or treacle, causing the blue or livid appearance on the skin, and the final arrest of the action of the heart.

The treatment in the first stage, except when the symptoms are very rapid, and the disease has assumed an epidemic character, is nearly the same as that for ordinary diarrhœa, ~~or ch~~olera morbus, and, when taken in time, may frequently be so cured. In such a case, the following mixture may be given in proper doses every two hours, or after each loose action of the bowels. Take of—

Carbonate of ammonia	1 scruple.
Prepared chalk . . .	½ ounce.
Aromatic confection .	2 drachms.
Cinnamon, or Peppermint water .	7 ounces.
Laudanum	1 drachm.

wo tablespoonfuls for a dose. When
axation is great, 2 drachms of
of kino should be added to the
, the same dose being given as
The vomiting in the early stages
ften be arrested by taking an
cing soda powder to which a tea-
il of brandy has been added, and
ing a folded cloth, wrung out of
inegar and water, across the pit
stomach. Strict attention must
l to diet and regimen during the
nce of cholera, care being taken
weaken the body by a poor or
l dietary; and though farinaceous
are best suited, they should be
with a due proportion of animal
ice,—all fruits, shell-fish, or such
, either being quite avoided, or very
gly partaken of. Where the bowels
fined, a dose of castor oil will be
one of the safest aperients; or a
composed of 2 drachms of mag-
l scruple of powdered rhubarb, and
ns of ginger, mixed in peppermint

n, against all efforts, the disease
to the second stage, the symptoms
e closely watched, and the moment
cuations begin to lose their natural
ers, the heat of the body declines,
ing cramps are felt, every means
e employed to restore bile to the
, keep up the animal heat, and
the pains. To effect these objects,
ository of 10 grains of soft opium
e immediately passed up the fun-
, one of the following pills given
ted; and as the hot bath produces
ch exhaustion, heat must be kept
tin bottles filled with hot water
l to the feet, legs, and thighs, and
the armpits, and, if possible, one
e abdomen or stomach. Take of—

vdered camphor . .	12 grains.
um	9 grains.
omel	18 grains.
inine	9 grains.

oroughly with extract of dandelion,
vide into six pills, one to be given
our.

veen each pill half a wineglassful
following restorative mixture is to
en to the patient. Take of—

mphor water . . .	5½ ounces.
omatic tincture . .	1 ounce.
andy	1 ounce.
irits of sal volatile .	1½ drachms.
irits of sulphuric ther	2 drachms.

As a stimulant, *small and repeated* doses of brandy and soda water, or champagne, are to be given as often as the strength of the patient seems to demand it. As the pain caused by the spasmodic state of the muscles is of the most acute description, the limbs must be rubbed vigorously with the following embrocation. Take of—

Tincture of soap . . .	1 ounce.
Laudanum	10 drachms.
Spirits of hartshorn .	2 drachms.

Mix. Or in cases of intense suffering, flannels dipped in the following liniment are to be laid over the parts, after having been previously well rubbed with the above embrocation. Take of—

Flour of mustard . .	2 ounces.
Turpentine	4 ounces.

Mix, and add—

Olive oil	3 ounces.
Spirits of camphor . .	2 ounces.
Spirits of hartshorn .	2 ounces.

Mix thoroughly, and apply in the manner directed.

When the collapse comes on rapidly, and the heat of the body, in despite of the bottles of water applied to it, declines fast, one or two quarts of warm gruel, with a couple of drachms of turpentine, are to be thrown into the bowels by the enema apparatus till the abdomen appears distended. The object of this large injection, which may be repeated once or twice, is to restore warmth to the system, and give a brief support to the exhausted body.

The patient should be moved as little as possible, and in the second stage every exertion must be strictly avoided, as the exhaustion is so great that merely lifting the patient's head to give the medicine will often prove instantly fatal. It must also be borne in mind, that when one suppository comes away another should be substituted.

From the commencement of the disease THIRST is a constant symptom, increasing with the relaxation; and when the serum of the blood (called the rice-water evacuations) begins to be discharged, the thirst becomes intense. According to some authorities on cholera, all cold and watery beverages are condemned as dangerous. By others, however, they are approved, and many patients are known to have recovered who were treated with cold water alone.

As the most fatal feature of the disease is the loss of the fluid part of the blood, that treatment is the most scientific, just, and humane, which attempts to give back *to the blood* those elements of which it has been robbed by disease. For this purpose, water, in which those salts have been mixed which exist naturally in the serum of the blood, offers the best and the most immediate means of compensating to the system for what it has been deprived of. This artificial serum may be made in any quantity by dissolving 2 drachms of muriate of soda—common salt—and the same of the carbonate of soda, with 1 drachm of muriate of potass, in 2 quarts of water. Of this the patient is to be allowed to drink freely as soon as the biliary secretion appears exhausted. But excellent as this is as a substitute, it still wants some of those vital principles which only living fluids possess. The only article which contains these principles in almost the natural integrity of the blood is the serum of milk, obtained in the making of cheese or curd—whey; and this, whenever obtainable, should be given in any quantity during the stage of collapse; and as on the fluidity of the blood being restored depends the life of the patient, too much of either the water and salts or of the whey cannot be given to ensure that result.

The amount of calomel ordered may, in weak constitutions, be curtailed to one-half, though the fact that some practitioners give very large doses proves how uncertain is still the mode of treating this fearful disease. See CHOLERA MORBUS.

CHORDA.—A string, a filament; the string of a musical instrument. A name given by anatomists to certain nervous and muscular filaments, such as the *chorda tympani*, a nerve of the ear; *chorda tendineæ*, delicate bands connected with the valves of the heart; the *chorda vocales*, or the vocal chords, fine ligamentous strings situated in the larynx; and some others.

CHORDEE. — A painful muscular spasm of the muscles, dependent on an inflammatory action in the part. See letter V.

CHOREA SANCTI VITI, OR ST. VITUS'S DANCE.—A peculiar kind of spasmodic nervous contortion of the body, like a kind of hysterical madness, usually attacking young females, and so called from the frequency with which it was said to seize young women on entering the chapel of St. Vitus, near the city of Ulm, in Suabia, and causing them to throw their bodies into the most [illegible]ordinary attitudes and grotesque [illegible].

For a true account of this disease, ST. VITUS'S DANCE.

CHORION.—One of the membra investing the infant in the mothe womb, and the most external of enveloping membranes. See M BRANES.

CHOROID PLEXUS.—One of coats of the eye, and a part of the p mater, or membrane of the brain. EYE.

CHRISM. — A mixture of oil a aromatic balsams, consecrated with formality on Easter eve by the Cathol bishops for the following year's use, employed by the Church in all bapt coronations, confirmations, and cases extreme unction.

CHRISOM.—A term in former applied to all infants who died in first month, and so called from a p of linen smeared with the holy oil, chrism, and worn from the hour of till removed by the priest at bapt The chrisom, or face cloth, hung over forehead, and was thought to bless tranquillize the child till admitted b baptism into the Christian penfold.

CHROME YELLOW. — A br yellow mineral pigment.

CHRONIC. — Any disease of standing, the opposite of acute; a applied to all diseases which have p their first or active stage without cured.

CHYLE. — The concentrated of the chyme, and the nutrient princ of all nourishment taken into the sys

CHYLIFICATION. — One of living functions always taking place the system, by which secretions changed in nature and properties. chylification is understood the process which chyle is eliminated from chy See CHYME.

CHYLOPOIETIC VISCERA. — A anatomical term applied to such org as are connected with, or assist in, process of elaborating chyle. Th organs directly necessary to the format of chyme are the stomach and duoden those which only assist in the proces the liver, gall-bladder, pancreas, and lac glands.

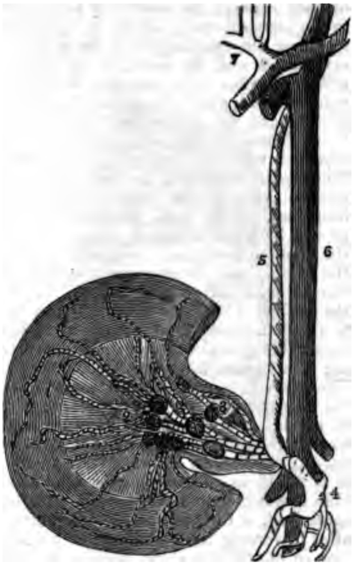
CHYME.—This, one of the most im- portant fluids in the body, is of a thic creamy consistence, of a greyish-whi appearance, and obtained by the proces

CHYMIFICATION.—Next to circulation of the blood, if not of equ importance with it, is the system ı, or the circulation of the liquid ıt obtained from the food di- ım the stomach. This fluid, contains all the elements of ɪe body is composed, both solid ɪ, and is the source and foun- the blood itself, is called in instance the *chyme*,—the pro- which it is separated from the ing denominated chymification, ɪmach being the only organ con- ı this stage of the process. The ived into the stomach is collected ɪap in the lowest and widest part ɪrgan, where it is surrounded by ric juice, a sharp, pungent fluid, tremely acid character, which has ɪr of dissolving or so far softening ıbstances taken into the stomach, a space of time varying from eight hours, the whole is con- ıto a soft, semi-fluid pulp, which, ɪhrough the lower or pyloric open- ɪe stomach, enters the commence- the intestines, or the duodenum.

ulpy mass, now called the chyme, ı duodenum subjected to the in- f two other fluids, the secretion ı liver (the bile), and that from reas (the pancreatic juice).

two fluids act on the chyme *rennet* does on milk, separating ro distinct parts—a white, creamy ı quintessence of the nutriment, ɪYLE, and a brown, solid, feculent from which almost all the chyle ı extracted, but which, in its rogress through the rest of the ry tube, is everywhere surrounded ıber of small vessels, called *lacteals*, ɪen mouths absorb every particle ment which may have escaped mass out of the duodenum, till, me it has reached the rectum, or he bowels, it has been deprived atom of what could be made l to the system. To insure this ıt duty, and guard against the ɪy of anything being expelled bowels that might be of service ɪrame, the small intestines are ɪre supplied with a kind of curtain, formed by a loose fold ning membrane, thickly studded teal vessels; these folds act as so terrupting doors to the passage of e matter, enabling the lacteals to very particle of nutriment the ay contain.

vhite, creamy fluid, the chyle, d by the *bile and pancreatic* juice from the chyme in the duodenum is immediately absorbed by the surrounding lacteal vessels, and carried to a fine, delicate membrane connecting the bowels to the spine, the mesentery (see cut, fig. 2), where all the more remote lacteals from the small and large intestines join or anastomose with them. The lacteals thus united diverge in several groups, each group or set of vessels entering a gland (fig. 2), from which gland they re-issue on the opposite side, fewer in number but larger in size, when, after forming a second intimate union, they enter a second system of glands (fig. 3), from whence they converge, and, uniting



SHOWING THE ORGANS EMPLOYED IN CHYLIFICATION.

No. 1. Section of a portion of the small intestines, with a part of the Mesentery in the centre; the Lacteal Vessels, seen everywhere, converging to—No. 2. First series of Mesenteric or Lymphatic Glands. No. 3. Second series of Mesenteric Glands, from which the enlarged lacteals proceed to No. 4, to form, with the Lymphatic Branches, the Receptaculum Chyli, terminating in—No. 5. Thoracic Duct. No. 6. The Descending Aorta. No. 7. The trunk of the Vena Cava Descendens, about to enter the right side of the heart, with the impure blood and the chyle.

at fig. 4, the *receptaculum chyli*, or the reservoir of the chyle, made up of the lymphatic vessels from all the lower parts of the body, then proceed upwards to form (fig. 5) the *thoracic duct*, or the great trunk of the absorbent system.

The thoracic duct, the replenisher of the heart, loaded with its nutrient fluid, ascends through the abdomen and chest to the commencement of the neck, when, receiving the lymphatics of the superior extremities and the head, it enters the left subclavian vein, mingles with the venous blood, and is immediately carried to the right side of the heart, to be sent from thence to the lungs, there to be vitalized with the oxygen of the air. The organs employed in the process of chylification are the duodenum, small intestines, liver, and pancreas. The process by which *chyme* is obtained from the digested food, *chyle* is separated from the chyme, and is eventually converted into blood, is called assimilation. Chyle, the product of the last process of digestion, is an albuminous fluid, composed of innumerable granules or corpuscles, consisting of albumen, fatty matter, and water. The chyle, in the whole of its course from the duodenum to the vein that carries it to the heart, is constantly going through some higher degree of change; thus, after passing the first set of mesenteric glands, it is found to be more highly organized than it was before entering them. In the same way, a further change is observed after traversing the second set of glands, and so on, till the chyle, having reached the upper part of the thoracic duct, attains its final organization, and becomes exactly analogous—except in the red colouring matter—to the blood, with which it is directly after mingled.

CICATRIX.—A scar; the mark left after a surgical operation; the new skin formed over an ulcer or a united wound.

CICUTA.—The name of one of the varieties of hemlock—Water Hemlock—which see.

CIDER.—A cool and refreshing beverage, made by fermenting the juice of a certain variety of apple growing in great perfection in the western counties of England. The fruit, having been gathered, kept for some time, and dried, is ground in a strong mill, the pulp placed in bags, and the juice forced into vats by a heavy pressure; it is then kept at a certain temperature to ferment, and lastly *to fine, and after* from four to eight days *is drawn into casks,* and kept in a cool place till the following spring, when it is drawn off into fresh casks, or bottled for use. To persons in health, and when taken in moderation, cider is a refreshing, wholesome drink, and very grateful in hot weather, but should be sparingly taken at any time by persons of weak digestion. Cider is apt to produce a species of colic resembling the *colica pictonum*, an effect supposed to result from the leaden vats often used in its manufacture,—the malic acid in the cider dissolving a portion of the metal. See DRINKS.

CILLÆ.—A word used by anatomists to express the eyelashes; as the term CILLIARY implies the ridge along either eyelid in which are set the rows of short hairs known as the cillæ, or eyelashes. At the same time, the glands that supply them with nourishment, and the arteries and veins circulating about either lid, are called cilliary glands, arteries, veins, &c.

CINCHONA.—The botanical name of the tree which supplies the Peruvian bark and its active principle, quinine. The cinchona is a fine forest tree, a native of Peru, and nearly all parts of Central America. There are three varieties of this tree used in medicine—the *oblongifolia*, or the red bark; *cordifolia*, or yellow; and the *lancifolia*, or the pale. All of them have strong bitter properties, and act as a powerful febrifuge. Cinchona belongs to the Natural order *Cinchonaceæ*. See BARK.

CINCHONINE.—An alkaloid found in the cinchona, and chemically obtained in small, pointed crystals, of a semi-transparent character, but possessed of little taste unless dissolved in acids or alcohol, to which it imparts an intensely bitter taste, and, though possessing some of the qualities of quinine, it is seldom used medicinally.

CINDERS.—Impartially charred coal, containing a certain amount of lime and other earthy salts, and often eaten by children whose stomachs are irritated by worms, or by the presence of a quantity of free acid, and who as naturally resort to the fireplace for relief, as the pig roots in the ground for a morsel of coal or lime to adulterate his rich food, or relieve the acidity consequent on it. When children are found eating cinders, instead of being corrected for the offence, it should be regarded as an instinct of nature to correct an evil, and the children prevented, by a little medicine, from repeating so disagreeable a practice. See WORMS.

'IOUS.—A term applied by o the external surface of the ts grey colour, the word being *cineris*, the Latin for ashes.

ÅR. — The native sulphuret :he form in which that metal 'ersally found; a bright red r, commonly called vermillion, g of sulphur and mercury. See

MON. — This well-known ce is the thin inner bark of ee, the *Laurus cinnamomum*, f Ceylon and the Eastern but now cultivated in the , and other tropical latitudes. ws to the height of 24 or 30 ral leaves, with flowers of a colour, standing on slender and belongs to the Natural *ceæ*. In consequence of the ıe true cinnamon, a large an inferior variety—"cassia" een substituted for it in the is, however, easily distin- n the true cinnamon by the d coarseness of the bark.

:ES AND USES.—Medicinally, ı used as a stimulant and and is employed in ıses of flatulence, and most vhich carminatives are called reparations of cinnamon are al oil, distilled from the bark; and compound powders; a compound tincture; and a as a vehicle for many

IAN, OR CAUCASIAN.— m is understood the highest , physical and mental, of the , both ancient and modern. ɔgist, and the student of the ,—such men as the philoso- enbach and Prichard,—have human family into five septs according to their intel- nd physical or bodily sym- Caucasian; 2nd, Mongolian; ian; 4th, American Indian; Malay.

count of each, see **Man**, and headings as above.

iar characteristics of the Cir- led Caucasian, from the people ı portion of the range of the re a large skull, with a small the upper regions strongly with straight features, dis- ked and *separated, the* forehead expanded, an aquiline nose, and small mouth, with the front teeth of both jaws perpendicular, having the lips well defined and pleasingly turned out, with a full, well-developed, and rounded chin. The skin is white, with a rosy tint, slightly inclining to brown; the hair is black, or of various shades of colour, curling or waving; the iris of the eye is dark or hazel in those of a brown complexion, and of a light blue, grey, or passing into a greenish tinge, in those of a florid or sanguineous complexion. In the Caucasian type, the moral and intellectual faculties are of a high order, and capable of large development. The subdivisions of this class are—the Syro-Arabian, Hindoo, Celt, Grecian, Italian, German, and Slavonian. See **Man**.

THE CIRCASSIAN.

CIRCASSIAN CREAM.—A cosmetic embrocation used largely by ladies for the purpose of clearing the countenance of freckles or any stain left on it by the too ardent action of the sun. Circassian cream is made by dissolving 4 grains of corrosive sublimate in half a pint of emulsion of almonds, and adding half a pint of spirits of wine, in which 1 drachm of the essence of bitter almonds has been mixed, and after shaking the whole well together, washing the face or hands with *it every* night at bedtime, and again, after the morning's ablution, applying it smoothly over the face, and leaving it to dry into the skin.

CIRCOCELE.—An enlargement of the spermatic vein, attended with a varicose distention of the vessels of the scrotum, in which the swelling of the part often gives an impression of rupture. This disease more frequently attacks the left scrotum than the right, and is often an affection most tedious to eradicate, and always very difficult to cure. It is distinguished from rupture by gradually reducing the contents of the scrotum while the patient is on his back, and then pressing the finger firmly on the abdominal opening, and making the patient rise, when, if it be a rupture, there can be no *return* of the swelling; but if a circocele, the enlargement will have increased instead of becoming smaller.

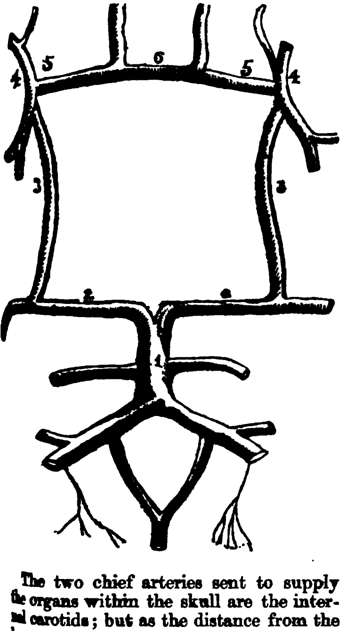
Treatment.—Some medical men advise the tying of the spermatic artery as the most effectual mode of conquering the disease. The general practice, however, is to employ cold lead lotions, with vinegar, to the part, extracting blood from the system, acting on the bowels by effective purgatives, and by keeping the patient on his back for some days, and applying a suspensory bandage, so as never to let the affected organ hang down. See Scrotum, and Disease of the Testes.

CIRCULATION OF THE BLOOD.—This, after respiration, is the most important function performed by the body, if between the two there can be any difference in the degree of their importance, as one cannot exist for a moment without the other. That this most interesting vital function should be clearly and thoroughly understood, we must anticipate, in a slight degree, some of our remarks on the heart. Though the ancients had some vague idea about the up and down motion of the blood, and had acquired a tolerably correct opinion of the course of that fluid as far as the abdominal organs and particularly the liver was concerned, yet the knowledge of the great and beautiful fact that the blood performed a perfect circuit through the body, was left for our own countryman, the immortal Harvey, who in the middle of the seventeenth century cleared up all the mystery which had so long enveloped the subject, by the discovery of the circulation of the blood.

The heart, which may be called the great reservoir of the blood, is divided *into a right and a left side*, each side
having two cavities or receptacles, o
being situated above the other. The t
upper cavities are called respectively t
right and left *auricle*, from *auricula*, t
ear; and the two lower receptacles t
right and left *ventricle*, from *ventricul*
a cavity or small stomach. All the impu
blood coursing in the veins of the low
extremities is collected in one large vei
the *vena cava ascendens*, and all t
venous blood in the upper extremiti
including that from the head, neck, arm
and chest, is received also in one lar
vessel, called the *vena cava descenden*
These two large tubes, carrying all t
venous or purple blood of the body, po
their contents into the upper chamb
on the right side of the heart—the rig
auricle; by means of a valve between t
upper and lower chamber, the blo
passes from the auricle into the rig
ventricle; from the side of this latt
cavity rises a large vessel called t
pulmonary artery,—though in reality
vein,—which, receiving all the blood fro
the right ventricle, carries it to th
lungs, where (as explained under Lung
Respiration, and Bronchial Tubes, whi
see) it becomes purified by absorbin
oxygen from the air and giving off it
carbon in the form of carbonic acid, an
being re-collected by the *pulmonary vei*
(properly artery), is brought back to th
heart in the form of a bright scarlet fluid
loaded with all the elements of vitality
but instead of returning to the localit
from which the pulmonary artery started
it terminates in the third chamber, o
left auricle, thus completing one circle—
the lesser, or as it is called the pulmoni
circulation. The arterial blood poure
into the left auricle from the lungs, pass
by means of a valve into the space belo
it, or the *left ventricle*, from the uppe
side of which arises the great paren
artery of the body, the aorta (see Aorta)
by which the blood is conveyed upward
and downwards to every portion of th
body, to build up the frame, repai
deficiencies, give heat to the system, an
supply those fluid secretions so perpetuall
required to maintain the healthy econom
of the system. The arteries having carrie
their blood to the skin, muscles, bone
and every tissue of the body, and expende
in the journey all its vital and constructiv
properties, the capillaries collect the refus
blood, and then, merging into the vein
these in turn, after collecting the impu
stream from all quarters, bring it bac
by the two large veins, the ascending a

descending *vena cava*, to the right auricle of the heart, from which, as before stated, it passes into the right ventricle, the opposite cavity to that from which the aorta started, thus completing the second great circle, or the systematic circulation of the blood.

CIRCULATION OF THE BRAIN.—The provision made by nature for supplying nutriment and vitality to the delicate structure of the brain is so singular and admirable, that we consider an account and illustration of this remarkable arrangement as both necessary to the completeness of "The Dictionary of Medical and Surgical Knowledge," and at the same time interesting, as conveying to the eye an accurate idea of the arterial circulation of the brain.



The two chief arteries sent to supply the organs within the skull are the internal carotids; but as the distance from the heart to the brain is so short, that the function or integrity of that important structure might be injured by the force of the blood rushing into its texture, a most ingenious contrivance has been adopted with these and other arteries entering the head, by which the force is materially diminished. This *benefit is* effected by giving the different arteries a zigzag direction, and by thus doubling the vessel on itself, making the blood have nearly twice as far to travel, while every turn and bend weakens its momentum. The Circle of Willis, as the square union made by the junction of the vessels in the brain is called, from a celebrated anatomist of that name, is composed posteriorly of—No. 1, the Basilar Artery, consisting of the right and left Intercostals, dividing into, No. 2, the Posterior Cerebral Arteries, which unite with, No. 3, the Communicating Arteries given off from, No. 4, the Internal Carotid, which in its turn sends off, No. 5, the Anterior Cerebral, united at their bend by, No. 6, the Transverse Communicating. The small branches running from the Carotid anteriorly are the Optic arteries. Within the area of the Circle of Willis are situated some of the most important portions of the brain, with the origin of Third, and other pairs of nerves. For the venous circulation of the brain, see MEMBRANES OF THE BRAIN, and DURA MATER.

CIRCUMCISION.—A Jewish religious and sanitary ceremonial, performed upon all male children on the eighth day after birth.

Though strongly impressed on the people as a religious obligation, and as a distinctive mark of the nation, there is no doubt its strict performance, attended with so much formality, was insisted on as a precautionary measure of health and cleanliness. The operation is sometimes rendered necessary in this and other countries from certain diseases affecting the organ, and consists in merely drawing the loose prepuce forward, and by a circular sweep of the bistoury removing about an inch of the circle. The disease that principally necessitates this operation is that of Phymosis, which see.

CIRCUMFLEX.—A professional term applied to such arteries, nerves, or other tubes as wind round a joint, or any particular part, and of which there are several varieties.

CITRIC ACID.—The crystallized acid or juice of lemons. This highly valuable drug, till the discovery of which the disease of scurvy was the terror and misfortune of our sailors, is made by mixing the expressed juice of limes, lemons, and oranges with a certain amount of chalk; the result, a citrate of lime, being thrown to the bottom of the vessel. This precipitate is next washed till all the impurities are carried off; it is then treated with distilled water and sulphuric acid, when the sulphuric acid, having a greater affinity for the lime than the lemon juice or citric acid has, unites with it, and falls to the bottom as an insoluble sulphate of lime. The clear liquid left is then filtered, evaporated, and poured into shallow vessels to crystallize, the process being further aided by heat.

The crystals so formed are the citric acid of the shops, an article possessing all the medicinal properties of the fresh lime or lemon juice. For the reason why citric acid was first made, and its value as a drug, see Scurvy.

Properties and Uses.—Citric acid combines with all the alkalies, earths, and metallic oxides, giving us by its union the citrate of potass, citrate of iron, and several other useful preparations. As a medicine, 9 or 10 drachms of citric acid, dissolved in a pint of water, is equivalent to the same quantity of fresh lemon juice, and may be given either in that form, in doses of an ounce three times a day in cases of scurvy; or 15 grains of citric acid, with 20 grains of carbonate of soda, may be dissolved in 8 ounces of water, and taken as an agreeable effervescing draught in all biliary sicknesses, or other affections of the stomach. See Lemon, Limes.

CITRUS, or CITRON.—The lemon. There are three species of this plant used in medicine or domestic economy: the *Citrus medica*, or lemon; *Citrus limetta*, or bergamot; *Citrus aurantium*, or orange.

CIVET.—An unctuous, odoriferous drug, obtained from a fold in the skin, or else from a small bag near the tail, of the quadruped called the civet cat, inhabiting India, Ethiopia, and Madagascar. Civet is of a clear brown colour, of the consistence of honey, and of an intensely powerful odour, producing, however, when a minute portion is taken and divided, with a large quantity of sand or sugar, a most delicious perfume. It is a species of musk, but never used in medicine.

CLAIRVOYANCE.—A peculiar state of the mind, in which the mental powers, singularly excited, have the faculty of seeing distant objects and things, and being physically impressed by what the mind's eye sees, all such sights, sounds, and impressions being unseen and unfelt by all but the clairvoyant. A peculiar condition of mesmerism. A form of electro-biology. See Mesmerism.

CLARET.—A species of French wine of *a pale red colour,* and said to possess both tonic and antiseptic properties, but, from its excess of acid, regarded as hurtful to gouty subjects. In the last century, immense quantities of this wine were consumed in England; but of late years its consumption has very materially declined. See Wines.

CLAVICLE.—The name given by anatomists to the collar-bone, so called from its presumed resemblance to the handle of an ancient key, *clavis*. There are two clavicles, one on each side; they are long, flat bones, in shape not unlike an Italic *ſ*. The clavicle is attached at one extremity, the outer end, to a process of the scapula, or shoulder-blade; and at the other, or inner, to the breast-bone, or sternum. Their purpose in the animal anatomy is to keep back the arms, expand the chest, and afford the superior extremities greater freedom and power.

CLAY.—An argillaceous earth, of which there are many varieties, used in the manufacture of pottery, porcelain, mineral teeth, bricks, &c., the quality of the clay depending upon the amount of silica, alumina, and oxide of iron contained in it.

CLIMACTERIC.—A derivative from the Greek, signifying a recording progression in human life, or a record of life from the birth to extreme decay and death.

By climacteric was understood a critical period in human life; when a certain stage or progress in life had been accomplished,. and when the frame was considered more susceptible of external impressions than at other times, and which if passed with safety, the body was likely (except from special circumstances) to escape the dangers of mortality. The ancients, who fully entertained and implicitly believed in these periodical changes divided them into certain epochs; the first taking place at the end of the 7th year and the subsequent periods answering to the numbers resulting from the multiplication of 3, 7, and 9 into each other—as the 21st, the 49th, the 63rd, and the 81st It is supposed that Pythagoras derived the doctrine of the climacteric system from the Egyptians; but be this as it may, the changes that take place at these several periods are very important, and are of two opposite kinds—the one of renovation, the other of decay.

It is seldom, in such an artificial life as a high state of civilization entails, that the processes of decay which mark the two last epochs can be carefully studied, some disease or other consequent on an artificial state of existence occurring, under which when chronic, as is generally the case, all the gradual advances of nature towards absolute exhaustion are lost sight of and remain unnoticed, till their concentrated effects are developed in what is known by the popular phrase of a "breaking-up of the physical and mental strength." When this climacterical decay comes on naturally, it is found to show itself more frequently, and always more strongly, in the man than in the woman: the reason of this is self-evident, from the more active, exciting, and exhausting career of the man than that of the woman. By the climacteric system, 7 years was declared to be the termination of childhood; 14 the term of puberty; 21 of adult age; and 35, or five times seven, as the height of physical and bodily strength: at seven times seven, or 49, the person was said to have reached the height of his mental strength, or intellectual powers; at 63, or nine times seven, he was said to have reached the grand climacteral; and at the tenth return of the seventh year, or 70 years of age, the ordinary limit of human life was said to be reached.

CLIMATE.—The facility with which man can adapt himself to every contingency of climate, and not only exist, but flourish, under the most opposite extremes of heat or cold, wet or dry, is one of the most remarkable circumstances connected with the history of human life; and yet the means by which nature has provided for these vicissitudes of temperature are as simple as they are beautiful. Although nature has been thus bountiful in enabling man to live with safety under the gloom of an arctic winter, or on the scorching plains of a torrid zone, some judgment and prudence are demanded from the man himself, if he hope to pass through his probation in either condition with comfort and safety. That he may not err in his adoption of such necessary rules, he is assisted by a species of instinct and by a number of examples, which, if he exercise the reasoning properties with which he has been so largely endowed, can only through ignorance or inattention cause him to do other than always turn such evidences to his benefit and guidance. The first of these is the natural craving of the system for a dietary in accordance with the temperature of the country in which the individual is placed—that is, according as the stomach and the imagination are left unfettered by prejudice or custom to follow an independent course of action. Thus, under a vertical sun, when the *exhaustion* from heat is excessive, and the circulation of the blood is in advance of the natural course, a full and stimulating diet of animal food is itself not only highly injudicious and uncalled for, but when persevered in becomes actually hurtful, and may be, under certain conditions, dangerous to the integrity of the system. Again, if, under the crushing influence of perpetual frost and snow, a man attempt to keep up his animal heat and resist the depressing potency of benumbing cold, by an Asiatic or vegetarian dietary, the consequences would be equally dangerous, and even more rapidly fatal. In the same manner, the colour of the natural clothing of the wild animals of the region should appeal to the judgment of man, and instruct him always to dress as nearly as possible in the same tone as that of the native denizens of the bush or plain, the ice-floe or the jungle.

Why man can endure with impunity ranges of temperature that, described by the readings of the thermometer, would to many appear perfectly absurd, proceeds entirely from the balance of power kept up between the temperature of the skin and that of the surrounding atmosphere, by the circulation of the blood through the lungs raising the temperature, by the absorption and mixture of oxygen from the air with the carbon in the blood, and the giving off of carbonic acid gas; animal heat being created by the instantaneous change. The more frequently a man breathes, as in running, the greater is the amount of heat the individual experiences. It is from this fact—the generation of an extra amount of animal heat, with a corresponding evaporation from the surface of the body—that the man who some years ago exhibited himself seated in a baker's oven, while his dinner was being cooked at his feet, was enabled to endure without danger so high a temperature, and for so comparatively long a period of time.

Climate may be regarded in two lights, that of physical and medical; it is, however, only in the latter sense that we purpose adverting to it here. In a medical point of view, climate may be said to possess two influences or powers,—1st, the power of *inducing* disease; and 2nd, the property of *curing* disease. In the latter sense only, and as a "curative agent," it is our intention to consider the subject.

The influence of climate on the human life is now so universally allowed, that it is quite unnecessary for us to say a word respecting its beneficial action on the animal economy; the benefit resulting from the change from a cold, humid atmosphere, to a warm, dry one, is also as well understood, and as marked in its effects, as a change of treatment from an ignorant to a scientific system is satisfactory and apparent. The influence exercised on the respiratory organs and the skin by a bland atmosphere is not only immediate but apparent—not merely confined to those organs, but, by the improved condition of the blood, resulting from such a change, reciprocating the benefit acquired on the brain, by the quicker and livelier state of the imagination—on the nutritive system, by a fuller condition of body from a perfect digestion; and on the nervous temperament, by the more regular and natural performance of all the functions of the body—the best indication at all times of sound physical health.

Some persons have an idea that the lungs are the only organ directly benefited by a change of climate; but this is a great mistake; the SKIN, more than any organ or set of organs, is influenced by climate, performing, as it does, some of the most important functions of the body. The skin, as we shall have occasion hereafter to show, is not only in itself a great absorbent system, as well as an exhalent apparatus for the entire body, but performs by night and day the duty of one vast lung, being in its chief function, a more important breathing organ than the lungs themselves.

On this account it is of the utmost consequence that the skin should have every facility permitted it of benefiting from a fresh climate; at the same time, it is of little consequence to a patient's health—after selecting the most favourable locality for his malady—unless he can take advantage of all the virtues of the air and soil to which he has been sent, by a stay of sufficient duration, to insure their beneficial action on his system.

The greatest mistake a physician can commit is withdrawing a patient whom he has sent for change of climate from the new residence, till a sufficient time has elapsed for the system to react under the influences of the change. The only case where the contrary practice should be adopted is when the climate is giving positive evidence of unsuitability to the disease. But as a general rule, unless the patient can afford the expense, or makes up his mind to stay in the locality for a sufficient length of time to secure all the advantages of the fresh climate, in most instances *he had better have* remained at home.

It has long been a subject of questio among medical men, how much of th benefit derived from change of climate i to be attributed to the novelty of the scen and the excitement consequent on new associations, or to the salubrity of air an soil. Probably, in many instances th advantages are nearly equally balance between a new mode of life with agreeabl company, and atmospheric influences.

The first effects, in nearly all situations are generally favourable; these, however after a week or two, may, and often do give place to a state of *ennui* and a condi tion of apparent retrogression. This dis heartening result will, if the locality ha been judiciously selected, pass off, and after a few weeks the system begin again to rally; and the body having become acclimatized to the situation, a reaction will set in, and every pore of the skin, as every inspiration of the lungs, will absorb from the atmosphere all the elements of good the climate can effect in the case.

The selection of a temporary residence for the invalid is a subject of much greater difficulty and importance than is universally supposed, many persons believing that *any* change of air not directly cold or wet is all that is necessary. The very contrary, however, is the case; for the physician who conscientiously sends his patient to a locality where the atmosphere may effect what his medicines have failed to achieve—a restoration to health,—has not only to consider carefully all the characters of the invalid's disease, and weigh well what soils and atmospheres are most serviceable to his complaint, but he must have regard in his selection to his patient's age, strength, his general temperament, and whether any other disease, latent or developed, complicates the case now, or may hereafter. The season of the year, also has to be regarded, for the locality wel adapted for the spring or autumn may b most injurious for winter or summer.

The physician must also consider whe ther a high, bracing situation, with a keen dry air, or a low, sheltered retreat, with warm, genial atmosphere, is best suite for the sufferer; or, again, whether a clos clayey soil, with an inland situation, or seaside abode, with a moist, warm atmo sphere, and a dry, gravelly soil, should selected. This subject of climate has late years commanded a large amount attention, and the capabilities of certai localities at home and abroad have be carefully studied by medical men, to enab them to decide as to the most eligib

on for invalids, in every disease for
change of locality is beneficial.
e we shall briefly describe under
ads of England, France, Italy, At-
Islands, and Colonial climates.

LAND AND THE CHANNEL ISLANDS.

a well-known fact, that the lighter
ore sandy the soil of a country, the
is the temperature of its atmo-
, and the more compact and clayey
nd, the colder it becomes: that
ver land is under cultivation, the
rature is drier and warmer during
ummer than where the soil has been
reclaimed, or in its native luxuriance.
er fact to be noted before entering
e local parts of our subject is, that
terior of all large islands, like the
l parts of a continent, are generally
tainous, and consequently cold, while
ore is always warmer, and often mild
almy.

chief want experienced in Great
in is a locality with a mild climate,
the temperature is equable, with a
situation, sheltered from the chills
sudden changes of atmosphere, so
on in this country, where, during the
months of winter and spring, those
te patients, suffering under pulmo-
affections and other organic diseases,
e sent to reside.

r such situations have been long
arly known to possess these advan-
though in different degrees and at
nt periods of the year: these are the
Coast, the South-West Coast, the
' End, and the West of England.

South Coast.—This tract of country
les the whole line of the Sussex and
pshire coast, embracing the Isle of
t, and extends from Hastings in
st to the Needles in the west. The
t comprehended under this name
mean temperature of 2° above the
ge of that of London, and is par-
rly advantageous as an invalid resi-
during the three winter months of
nber, January, and February. The
most esteemed for their salubrity in
district are Hastings, Brighton, and
rcliff on the Island. This district is
adapted to pulmonary cases, and dis-
accompanied with irritation and a
ncy to inflammatory action.

South-West Coast.—This district ex-
from the borders of Hampshire to
outh Sound, and includes the sea line
rset and Devonshire, and has long
noted for the extreme mildness of its
e; the *temperature through the* three most variable months of the year—November, December, and January—being 5° higher than that of London. The most celebrated localities for a winter residence are Weymouth, Torquay, Dawlish, Sidmouth, Exmouth, and Salcombe, the latter being considered the warmest spot in the whole kingdom, though its circumscribed situation renders it of less importance for invalids than Torquay, which, to its salubrity of climate, adds a fine extent of adjacent country, with beautiful rides and drives; a source of immense advantage to the invalid.

The conditions most benefited by this climate are consumption and chronic bronchitis.

3. *The Land's End.*—This is the smallest district of all, and merely embraces the promontory of the English peninsula, Penzance; but in consequence of the peculiarity of its situation, it enjoys a remarkable equality of temperature, not only throughout the year, but through the night and day, and on *this* account is only second to Madeira. The humidity of its climate, however, is a serious drawback to its otherwise extremely warm situation, the heavy rains and occasional gales to which its exposed situation render it liable, detracting greatly from its value as an invalid residence. In the winter months, Penzance is 6½° warmer than London during the night, and 3° during the day.

The cases most suited to Penzance are those of an inflammatory and irritable character, while to the relaxed and nervous it is decidedly objectionable.

4. *The West of England.*—The coast along the estuary of the river Severn, including a large portion of the counties of Somerset and Gloucester, is usually understood as the boundary of this district. The climate is here more bracing, more stimulating, and drier than that of any of the others. The situations most frequented are Malvern, Bath, Bristol, and Cheltenham; these are generally selected for autumn and winter residences. The diseases which derive the greatest benefit from the west of England climate are gout, scrofula, and dyspepsia, or any complications of those affections, and it is admirably adapted to all languid and relaxed constitutions.

The Channel Islands.—Of these, Jersey is the island most suited to the invalid. The climate of the group greatly resembles that of the south-west coast, the temperature varying from 1° to 2° higher than that of Devonshire. This advantage, however, is more than over-balanced by the high winds so frequently prevailing among the islands. The same class of diseases which are benefited by the climate of the south-west coast will find relief in Guernsey and Jersey. As summer residences, both islands are very valuable to the convalescent from any pulmonary affection. In the same respect, guided by the nature of the debility, the climate in the neighbourhood of Harrogate, Tunbridge Wells, Buxton, Leamington, and several other inland towns, will be found most serviceable to the invalid, either as a summer or autumn residence, the weak and relaxed selecting those places where the water is impregnated with iron, and the irritable and inflammatory those which possess saline springs.

FRANCE.—The south of France has long been greatly extolled for the salubrity of its climate, but, beyond an increase of temperature, it appears, with but few exceptions, to possess little to recommend it above the south of England; for the sandy soil and fogs of one district, and the keen, cold winds of the other, greatly neutralize the advantage gained by a few degrees of temperature.

The districts selected for invalids in France are the South-West and the South-East of the kingdom. The *South-West* lies in the Bay of Biscay, and extends from Bayonne to Bordeaux on the coast, and to Pau and to Toulouse in the interior. The climate of this portion of France greatly resembles that of the south-west of England, being, like it, soft and humid, with a temperature, however, 4° higher. The town of Pau has been selected as the best situation for the foreign invalid, as from its situation at the base of the Pyrenees it possesses a fine dry soil, is free from the fogs so common along the coast, and has the advantage of a remarkably mild spring. The cases which derive the greatest advantage from this climate are those which in England are sent to the south-west coast.

The South-East, or Provence.—This district extends from Montpelier, in Languedoc, to the Var, at Nice, the whole washed by the Mediterranean. Though in the same latitude, the country is some degrees warmer than the south-west coast of France, and at the same time drier, but much more irritating and exciting. The great drawback to this district lies in the *piercing* easterly wind—called the *mistral*—*that sometimes blows* many days together, carrying ague and shivering before it, and rendering the district highly injurious to all who suffer from catarrhs or pulmonary affections. To send consumptive patients to the south-east of France is therefore decidedly improper and dangerous. Nice, being situated on the Italian confines of the district, is the only exception to the general rule; but though a few cases of consumption have derived benefit from a residence in Nice, the *number* who die there of the disease is a proof that, for phthisis, the locality is far from beneficial. The diseases which derive the greatest benefit from the climate of Nice and the south-east of France are chronic rheumatism and asthma, and constitutions of a phlegmatic character, or such as are simply relaxed and debilitated.

ITALY differs little in temperature from Provence and Nice, though softer, less humid, and still less exciting. The sirocco, however, so common in the summer months, makes it far from a healthy residence at that period. The chief localities for invalids in Italy are Genoa, Pisa, Rome, and Naples. Rome, from being warmer in the winter, and drier than the others, is allowed to be the best Italian locality for the invalid. The diseases for which the climate of Italy is most favourable are chronic bronchitis, chronic rheumatism, asthma, and gout, Genoa having been long considered as favourable for the cure of that disease as Rome has been for asthma. The best seasons for a residence in Italy are from October to May or June.

MEDITERRANEAN ISLANDS.—Malta, the only one of these islands belonging to England, has been made the chief resort of invalids in the Mediterranean; the arid state of the soil, however, with the quantity of dry sand for ever suspended in the air in fine weather, and the currents of cold air to which the island is subject, with the heavy rains of winter, make it highly unfit for all pulmonary patients; indeed, *one-tenth* of the inhabitants are said to be annually carried off by phthisis. To gouty or rheumatic patients Malta may afford benefit during the dry months, but for all affections of the lungs it is most decidedly objectionable.

THE ATLANTIC ISLANDS.—To those who can bear the fatigues of a sea voyage, and the expense of a long foreign residence, there can be no doubt that more real good will be derived in pulmonic and scrofulous disease from six months passed in one or other of the Atlantic islands than from years spent in Europe, always remembering that it is such patients only as should and ought to be allowed to undertake the voyage.

The Atlantic islands are divided into two sets, the eastern and the western. The *eastern* contains the different groups of the Azores, Madeiras, the Canaries, and sometimes the Cape Verde; of all these, the Madeira group of three islands is the most important, from being at the same time most convenient to the visitor and salubrious for the patient. The high central chain of mountains in the chief island—Madeira—gives it the advantage of a cool land breeze during the night, and a refreshing sea breeze in the morning, which, with the summer trade winds, combine to cool the otherwise sultry temperature of the island. Madeira is 6° warmer in its mean annual temperature than southern France and Italy, and is 12° warmer in the winter, and 6° cooler in the summer, than the south of Europe. The invalid has the advantage of being able to reside in the capital—Funchal—in the winter, or rainy reason, and retiring to the vine-clad hills in the summer, where he enjoys all the luxury of a tropical climate without its usual exhaustion. Next in importance after Madeira are the Canaries, which lie many leagues farther south, Teneriffe, the most important of the group, possessing nearly the same advantages as Madeira, except that it is 6° warmer,—the mean temperature of Funchal being 65°, while that of Santa Cruz, the chief town of Teneriffe, is 71°. The Azores, lying 5° north and 7° west from the Madeiras, possess a climate and accommodation for invalids about midway between the other two groups; the same class of patients being sent to all alike. The Cape de Verde Isles are still more tropical than the Canaries, though much of the oppressive heat is modified by the alternate land and sea breezes, and their medicinal characters are the same as Madeira.

The *western* Atlantic islands embrace the Bermuda and the Bahama cluster. The Bermudas, a cluster of very small islets, lie in nearly the same latitude, 32° N., off the Carolina and Georgia coast of North America; but being low and rocky, and exposed to all the storms of that portion of the Atlantic, are far less eligible as invalid residences than the lofty, verdant islands of the north-west African coast, and seem to possess a climate analogous to Malta. As *retreats* for the *American or West Indian invalid*, they are much better adapted than for the European patient, except for scrofula.

The Bahamas are a much more extensive group, composed of many important islands, and, lying many degrees farther south, in the course of the Gulf Stream, and nearer the coast, are more tropical in their character and varied in their vegetation than the Bermudas. The winter and spring are cooler than in the West Indies proper, while the summer heat is nearly the same. The Bahamas are greatly resorted to by the exhausted inhabitants of Jamaica and the other large islands as a residence during the winter months. To the European, the climate of both groups is considered very beneficial in all cases of a calcareous habit, or a disposition to stone or gravel, to scrofulous and scorbutic patients, and persons liable to osseous deposition (as aneurisms of all kinds), while a residence in any of these islands is supposed to be specially serviceable in gout.

THE COLONIES. — *Canada.* — Though embracing a latitude of nearly 10 degrees, and situated in the same parallel as France and the south of England, the climate of the two Canadas is very unlike either that of this country or of France; for though the summers are extremely forward and beautiful, the winters are remarkably severe, the snow lying long, and the frost being intense beyond any European idea of wintry severity. A considerable difference, however, exists in this respect between Upper and Lower Canada,—the winter in the Lower or East province being longer and more intense than in the Upper or West, where, from the mild airs brought from the vast lakes or inland seas that border the province, the temperature of the atmosphere is much higher than that of Lower Canada, bounded by the frozen river and gulf of St. Lawrence, —the extreme dryness of the air and the steadiness of the seasons making the climate of Canada, as a general rule, extremely healthy. Among the natives of Labrador, and even Greenland, where the summer appears to the European only a less severe winter, and its duration is counted by weeks instead of months, where the tallest vegetation is hardly higher than a bush, and where the scale of animal dietary is confined to dry fish and seal, or fresh blubber, with an occasional change to the smoked flesh of a bear or reindeer, the health of the Esquimaux is remarkably free from those ailments which are found so frequently among the better fed and warmer housed inhabitants of more favoured climes. Yet, though fed on the least nutritious of animal fibres, clothed in skins, living in huts built with blocks of snow, surrounded by an atmosphere so cold that the nose, ears, or fingers may in a few minutes be frost-bitten, and if not instantly attended to, will mortify and drop off,—deprived for the greater part of the year of the cheering sun, and surrounded by the lights of the aurora borealis,—man, even under all these drawbacks, aided by the bountiful provision of nature, which enables him wherever he goes to resist the influence of climate by the generation of animal heat, and the wisdom of adopting a costume similar to that in which the bear and other animals of an arctic region are clothed, can resist all the danger of climate.

AN ARCTIC WINTER.

Australia. — The portions of this immense dependency of the British crown as yet settled and politically organized, embrace only a small part of the west, a large extent of the south, and about one-half of the eastern coast of the continent, with nearly the whole seaboard of the island of Tasmania.

Though some few special differences *exist in the climate* of the various colonies of *Australia*, the general characters of all
are so similar that one descripti
answer for the six settlements.
highly-favoured region all the
phenomena peculiar to the E
continent are entirely reverse
summer of this hemisphere is th
of that; our morning is the Au
night; the trees are leafless, a
their bark instead of their folia
gorgeous flowers have no perfun
birds are voiceless; the quadrupe
on *two feet* instead of four; and,
the north and north-east winds
here bring cold, sickness, and dis
are there loaded with warmth and
and are as anxiously looked for
tralia as they are dreaded in E
The average number of bad
Australia throughout the year
25, with 60 wet or cold, makin
a total of 85; the rest are fine,
agreeable, and balmy days, with
tensely blue sky, unruffled by a clo
temperature in June—mid-winter-
falls below 46°, and ice is rarely
summer, the thermometer at Syd
Melbourne ranges from 90° to 1
heat at noon being often 20° hig
in the morning, and the variatio
frequently 15° between one day
next. Yet, despite these chang
idea of the salubrity of the clim
be inferred from the cultivation
vine, and the fact that orange, len
almond trees grow common in he
and fruits of all kinds are yielded
perfection, and sometimes prod
crops in the year. That its effects
are equally gratifying as on the v
kingdom is notorious in the r
provement observable in the im
after a short residence in the coun
the look of youth and freshness i
to all who live well and temperat
the mountains and table lands t
much cooler, till, at an elevation
feet above the sea, warm clothin
large fire become necessaries. T
wind, which in winter is moderat
in the summer becomes hot, an
sirocco, withers all before it. C
tion and bronchial affections are u
as an indigenous disease; such
do occur are those imported fro
into the colony; for in the early
phthisis, the climate of Australi
likely to act as a beneficial cure
enemy to the malady: gout and c
affections, and such complaints
Malta, and the Bahamas are celeb
their efficacy in curing, will be

derive an equal benefit from the climate of Australia.

Heat is not the only consideration that should weigh with the person selecting a climate as a place of residence. Electricity has a large share in making up the salubrity of a locality, and this, given off from the earth, is perpetually producing some phenomena not always observable by the eye or senses in the atmosphere that surrounds us. It is only when it takes the visible shape of lightning, and produces immense rifts and voids in the air, into which the atmosphere rushes howling, that we comprehend some of the mysteries of nature. There are arid tracts in New South Wales and the interior of Australia on which, with the sandy wastes of Africa, rain never falls; such regions, however, are subject to tempests of sand, more fearful in their duration than the fiercest hurricane of the tropics. These tempests, when occurring in Italy and Syria, are called the sirocco; in Africa and more southern regions, the simoom. This land storm is caused by the hot north wind carrying before it dense clouds of fine sand, which, rising high in the air, obscures the sun, turning it of a blood-red hue, while, like an impervious wall, the sand is carried with incredible speed across the plain, destroying *everything before* its resistless rush. The camel, now introduced into Australia, aware of its danger, buries its nostrils in the sand of the plain, placing its back to the coming tempest; while the driver, if unprepared for the danger, should he chance to inhale any quantity of the scorching cloud, is seized with an instant suffocation, and, overwhelmed and prostrated, is soon covered with the accumulating sand, from which he is seldom raised alive; should he, however, survive the brief passage of the storm, he is oppressed as with a frightful asthma, and a depression of spirits from which it is extremely difficult to rouse him.

THE PASSING OF THE SIMOOM.

New Brunswick.—Population and the progress of agriculture have in less than 90 years changed this once barren wilderness into a fruitful, healthy, and productive colony. The best proof of the goodness of its climate is shown in the low rate of its mortality—the deaths only averaging *one* in 100; and though the cold in the winter is very severe, it is of that dry character well suited to English and Scotch constitutions. The average of summer heat is about 80°; the summer, too, is long, the weather generally open, and the number of rainy days less than those in England.

Nova Scotia lies south of New Brunswick, and is, indeed, some degrees farther south than the parallel of Great Britain; yet, on account of the great number of its lakes, bays, and gulfs, it is considerably lower in temperature than its more northern and sister colony; and although the winters are more severe than in England, the cold is more bracing, healthy, and conducive to longevity and vigour, from its dryness and the constant serenity of the sky. The extreme cold in the severest months of the year is 15° Fahrenheit, and the maximum of its summer heat 95° in the shade. The summer is remarkable for the forwardness of all vegetation, and the autumn for its healthiness: the average annual mortality of the colony is about *one and a quarter* in the 100.

British Columbia and Vancouver Island.—There can be no doubt that the statements hitherto promulgated about the climate and salubrity of these two north-west American colonies have been grossly exaggerated, for, with the exception of a few localities on the southern borders of either settlement, the country is bleak, wild, and unproductive, and its atmosphere the most trying and variable in the world. The greater part of the land is composed of irreclaimable morass, or covered with forests of such extent that it is calculated sufficient timber exists in the colony to supply the whole world for centuries. The winter is long and intensely severe, and the summer short and extremely hot; the nights are always cool, and the changes so frequent and excessive, that a difference of 60° is often experienced between sunrise and sunset. So sudden and intense is the cold, that horses occasionally drop dead from masses of ice forming in their nostrils, while their hoofs often burst with the frost. The discovery of gold on the forks and branches of the Fraser river has hitherto prevented people from regarding the colony in any light but as a source of acquiring sudden wealth, and interested statements have been published of a region where the cold paralyzes exertion, crushes the emigrant's hope, and defeats even the influence and power of capital. The fogs, cold, and wet of the winter, with the heat, insects, and fluctuations of temperature in the summer, render the climate of the greater part of both these colonies extremely unhealthy.

Cape of Good Hope and Natal.—Here, as everywhere else, the physical features of the land and the geological condition of the earth exercise a powerful influence on the climate. The South African peninsula, known as the Cape Colony, consists in chief of three parallel ranges of lofty mountains, gradually increasing in altitude, till the third and last range attains a height of 10,000 feet: thus the whole settlement presents a range of three terraces or broad plains of table land, bounded in front and behind by a chain of mountains. From these causes the vicissitudes of the climate of the Cape are extremely severe, and during the cold or wintry season the fall of rain descends like a deluge, while in the scorching months of summer the earth in some localities is seldom refreshed by a shower. But though the wet season is long and heavy, and the dry hot and parched, the inhabitants enjoy a fair amount of health; and pulmonary diseases, unless imported into the colony, are but seldom seen; indeed, with ordinary precaution in resisting the cold airs of evening, the climate of the Cape may be regarded as salubrious.

The colony of Natal, lying more to the east, and considerably lower than that of Cape Coast, and being more *abundantly watered* with rivers, is much more mild and humid; the inhabitants enjoying a degree of health and immunity from disease not often experienced in so tropical a latitude. The eastern and western portions of the Cape provinces are extremely healthy; the summer, on account of the great heat, is certainly less healthy; but the winter and spring months are very salubrious. High winds are frequent, and add to the healthiness of the climate; but frost and snow are unknown, except in the high regions, as on the mountains to the north of Natal: the summer is here called the wet, and the winter the dry season.

The temperature varies in different parts of the Cape colonies from 28° to 104°; the climate of Natal is considered remarkably healthy, especially to those who take much exercise, and who are engaged in agricultural occupations.

New Zealand.—Owing to the grea latitudinal length of these islands, the two being more than 1,200 miles long, the climate is naturally very variable; it is, nevertheless, one admirably suited to the English constitution; the North, or New Ulster Island, having a summer heat equal to that of Paris, and a winter cold said to resemble that of Rome; while the South, or New Munster Island, has a summer analogous to that of Jersey and the Channel Islands, and a winter in which the cold resembles the south of France. High winds are very frequent, but these add materially to the health of the climate. The snow very rarely lies at the sea level on either island. In consequence of the immense extent of coast exposed to the South Pacific Ocean, the atmosphere is extremely moist; yet this, so far from being injurious, can neither be called a damp nor hurtful moisture, as it imparts a pleasing softness to the skin, and an elasticity to the animal spirits. The average temperature of the North Island in winter is from 45° to 51°, and from 64° to 70° in summer; while the winter temperature of the South Island averages 42°, and in the summer 61° of Fah. The general salubrity of New Zealand may be inferred from the mortality of the colony, being less than *one* pe cent.

In conclusion of this subject, we maj observe generally that for pulmonary o consumptive cases, the climate mos desirable is one with a pure dry air; no necessarily hot, only without severe o sudden changes. In this respect Australi is probably the best climate in the worl for such cases; at all events, it is fully equal to Madeira.

Chronic rheumatism also requires a dry, pure, and warm atmosphere. The affections of the kidney and bladder demand a warm, genial climate, but not excessively dry; while scrofulous diseases, according to the temperament of the patient, often derive as much benefit from the cold, bracing air of Canada, as from the humid heat of the West Indies.

There is one point that should never be lost sight of in sending a patient to a foreign climate, especially in cases of consumption; which is, that the *only* chance of benefit by a change from a cold to a warm atmosphere can be effected in the *first, or early stage* of the disease; that when tubercles have formed, or ulceration commenced, such a change is not only faulty but dangerous, and sure to end in the premature death of the sufferer. It was the ignorant infatuation in a contrary belief on the part of both doctor and patient which for years made an English graveyard of the beautiful island of Madeira. If any change can do good, it must be in the *early* period of the disease. A contrary persuasion is an act of delusive hope to the sufferer, and a cruelty to the friends, by sending a beloved relative to die alone in a foreign country, under the supposition of deriving health and vigour from a climate whose warmth accelerates the disease, and rapidly hurries on the fatal catastrophe.

CLINICAL.—A medical phrase applied to practice and to lectures; the word being derived from the Latin *clinicus*, a bed. Thus clinical practice embraces such portions of medical instruction as are given at the bedside of the patient, when the surgeon goes his daily round through the wards of a hospital, followed by his pupils and students, and the observations connected with each case are delivered at the bedside of the sufferer; the pupils having just heard the symptoms detailed by the clerk, with the history of the patient, and what has been prescribed for him. The most important features are enlarged upon in the theatre, when the surgeon gives his opinion as to the result of the case, confirming his views by past instances: such demonstrations are denominated clinical lectures. Clinical education is divided into clinical medicine—that is, all cases falling under the physician's care, as fevers, internal disease, &c.; and clinical surgery—such as accidents, operations, tumours, and all diseases appertaining to a surgeon.

CLINOID.—Something resembling a bed. A name used in anatomy, and given to certain processes, or projections, like bedposts. In the sphenoid bone, one of the bones forming the base of the skull, there are four of these—two anterior and two posterior to the *sella Turcica*, or Turkish saddle.

CLITORIS.—A small, roundish gland or organ appertaining to the female, and situated above the nymphæ and before the urethra.

CLOTHING.—There is no subject of more consequence in a hygienic point of view affecting the dwellers in our variable climate, or that deserves more serious attention, than that of clothing; on this account, no number of transient fine days in April or May should induce the person to change his winter clothing till summer has *fairly* set in. The large amount of woollen clothes worn by all classes in this country, being bad conductors of caloric, are the best possible covering in which the people can be generally dressed; for, owing to that non-conducting quality, they not only retain round the body the heat generated there, but at the same time prevent external heat, and also cold, from reaching the surface, thus keeping it of an equable temperature.

When flannel worn next the skin produces either exhaustion, or too much perspiration, or irritates by its friction, it should be set aside for cotton fabrics of the same shapes. Chamois leather is by some persons preferred to either flannel or cotton, and if worn as a suit next the skin is beneficial in a third degree. Care should be taken to keep the extremities free from moisture, and of a uniform temperature: the socks which are generally used by men should, after 45 or 50 years of age, be superseded by stockings. Great care should be taken always to keep the chest and front of the stomach from feeling the cold winds of spring and winter, by the additional protection of a piece of flannel suspended from the neck, or the use of a hare-skin, and by keeping the coat, plaid, or mantle, either tightly buttoned or properly spread over those organs. In all cases of clothing, the first attention should be given to the feet, as through those channels one-half of the diseases that attack mankind are led into the system, an evil which, if the extremities are kept clean and dry, and covered with good stockings and thick shoes, is not likely to occur.

CLOVES are the unexpanded flower-buds of an East Indian tree growing in the Molucca Islands, and extensively cultivated by the Dutch, who for many years had the sole monopoly of this spice. The tree that yields the clove is the *Caryophyllus aromaticus*, belonging to the Natural order *Myrtaceæ*. Cloves are a warm, stimulating carminative, but only used in medicine as an adjunct, to give an agreeable flavour to bitter infusions, or correct the griping of strong aperients. The essential oil, of which they contain a large quantity, is the only preparation of cloves kept.

CLUB-FEET. See FEET, MALFORMATION OF.

CLYSTER, OR GLYSTER. See INJECTION.

COAGULUM.—A curdled or consistent mass, like a jelly, separated from some fluid; as the coagulum of milk—curds; of the blood—the clot; and of albumen, as the white of egg, when coagulated by heat, alcohol, or acids.

COBRA DI CAPELLO, OR THE HOODED SNAKE.—This dangerous reptile, of which there are many varieties, is a native of India. In a state of repose, the cobra is of the same size at the neck as at the body; it is only when excited, and it unfolds its coils to strike, that the skin of the neck expands like a hood, and the fearful hiss that indicates its rage and the approaching danger, takes place.

Experience has shown that the poison of this dreaded serpent is not so suddenly fatal as was formerly believed, the bite seldom proving mortal under two hours. Of all the serpent tribe the cobra is the most sensitive to music or any monotonous noise steadily continued. The effects which follow the bite of the cobra are nearly the same as those resulting from the stings of other poisonous reptiles,—swelling and discoloration of the part, pain, sickness, fainting, and coma. For treatment, see BITES, STINGS, POISONS, and SERPENTS.

COBWEB.—The fine, delicate texture spun by the spider, with the same object, though not in the same manner, as the downy cocoon of the silkworm,—to form a habitation,—has this special difference, that as well as being its house and protection for the young, it is also a lure or net whereby the spider gains a means of subsistence. The cobweb has for many ages been admitted into the popular Pharmacopœia of most countries, as a remedy against certain diseases when taken internally, and as a beneficial application when used externally. In internal bleedings and some nervous affections, cobwebs have been employed by the ignorant as a valuable agent, while in all cases of superficia cuts and injuries, a certain thickness o cobweb has been regarded as a safe an certain means of cure. See ARACHNOIDE and SPIDER.

COCCULUS INDICUS, OR INDIAN PEPPER.—A large poisonous berry nearly as large as the juniper, possessing peculiarly stimulating and intoxicating properties, and, though not employed in medicine, often extensively used to adulterate malt liquor, giving to weak mashes the heady, sleepy properties erroneously supposed to result from an excess of malt. It is also largely used by water poachers to stupefy the fish; the bruised berry being flung into the pond, the fish, attracted by its aroma, come to the surface to feed on or imbibe its odour, when they become passive and are skimmed off the water with a net.

COCCYGIS OS.—In anatomy this bone is so named from its supposed resemblance to a cuckoo's bill, and is the last bone in the spinal column, the termination of what is called the *sacrum*, and, bending inwards, assists to close the cavity of the pelvis below, and support the various organs contained in that space. It is in this bone where that acute pain is felt from a kick, or the sudden fall backwards of a person, when he comes in contact with a stone or other hard substance.

COCHINEAL.—A beautiful scarlet dye, produced from an insect about the size of a pea. This article, greatly used in pharmacy to give a beautiful colour to tinctures, powders, and confections, and extensively employed as a pigment, from which the colours of lake and carmine are obtained by means of a solution of tin, is the dried body of a female fly, native of Central America and its adjacent islands. The female flies, having no wings, congregate in thousands on the low plants and trees, such as the prickly pear, in Mexico, from which they are brushed or shaken off on sheets, collected in bags, and suffocated by the fumes of sulphur; they are then dried in the sun, and packed for exportation in *serons*. Popularly, cochineal is supposed to possess great antispasmodic properties, and in this belief it has long been a popular remedy for hooping-cough, especially when combined with an alkali. This much-believed-in remedy is prepared by simmering 10 grains of cochineal bruised, with 20 grains of salts of tartar—subcarbonate of potass—in half a pint of water for ten minutes, sweetening the hot liquor with brown sugar, straining the whole, and,

d, giving the child from a tea to
oonful every three or four hours.
mixture is frequently of great
ere can be no question, though that
itage depends more on the potass
the cochineal there can be little
See Hooping-Cough.

LEA.—The name given to cer-
ing cavities in the solid part of the
bone, forming the internal ear,
d from their resemblance to a
ell.

LEARE MAGNUM, C. ME-
AND C. MINIMUM.—Profes-
rms used by physicians in writing
scriptions, and signifying a table
, a dessertspoonful, and a teaspoon-
ived from *cochlea*, a cockle, the
spoon being supposed to resemble
e valves of that shell.

ILEARIA.—The botanical name
al medicinal plants, the chief of
re the *C. armoracia* and *C. offi-*
or the Horseradish and Scurvy
hich see.

A-NUT TREE.—One of the most
nt trees of the Eastern Hemisphere,

THE COCOA-NUT TREE.

tensively spread over the islands
dian Ocean and the Pacific. The
ee is a genus of palms found all over the tropical regions; but generally growing within the reach or influence of the sea or salt water, and often taking root on sandbanks or thinly covered reefs, almost directly after they appear above high water. The tree rises from 60 to 90 feet in height, and affords food, drink, oil, clothing, and shelter to the natives, has a soft, fibrous stem, marked on its bark by rings, produced by the fall of its leaves, two leaves falling off annually; so that the age of a tree can always be told by counting its rings, half the number of the whole giving its age. The top of the tree is always crowned by a plume of from 12 to 15 long leaves, like gigantic ostrich feathers, about 15 feet long. The fruit, or nut, hangs in clusters under the crowning plume, and consists of a shell, enveloped in a strong fibrous pericarp, or capsule.

In hot climates every part of the tree is made use of: the natives chew the root as a substitute for the areca; the stem is used as uprights and supports for houses, and for fashioning many domestic implements; the leaves form a thatch, or are made into umbrellas, baskets, buckets, and lanterns; their ashes yield potash in abundance, and their mid-ribs are used as oars and even brushes. The fibre from the nut is woven into cloth, ropes, mats, sacking, and even clothes. By fermentation the juice of the stem is made into a palm oil, and by distillation into an ardent spirit, and also a coarse sugar, called jagghery; while the pith, dried, ground, and washed, forms a farinaceous food similar to sago. The jagghery, or coarse sugar, when mixed with lime, forms a durable compost that takes a polish like marble. The fruit itself is a wholesome food, and its milk a cooling beverage, and forms the chief aliment of many of the natives. The fibre of the shell, called coir, is used also for brushes; the shell is turned and polished into drinking-cups and measures, while the substance of the nut itself, when pressed, yields a large quantity of oil, which is used largely for lamps and flambeaux; and, lastly, the unexpanded buds, when boiled, form a delicate and much-esteemed food. See Food.

COCTION.—A phrase sometimes used to express the function of digestion, as far as the process of chymification, or the formation of chyme, is concerned.

CODEIA.—An alkaloid principle obtained from opium; but being weaker and less reliable than morphia, is seldom used.

COD.—This well-known deep-sea fish, found in such immense shoals on the Dutch and Newfoundland coasts, and also plentifully on the eastern shores of Great Britain, is of the *gadus* species—the *gadus morrhua* of the naturalist,—and averages, when full-grown, about three feet in length. As an article of diet, the flesh of the cod, when newly caught, is not only considered a great delicacy, but forms a light, nutritious, and extremely wholesome food, particularly serviceable for invalids and those of weak digestion. The cod is in season from the beginning of February to the end of April. See FOOD.

COD LIVER OIL.—This remedial agent, which has sprung into general use within the last ten years, and has only been known to the profession since 1840, is an extremely old and popular remedy, especially among seafaring people and the inhabitants of fishing districts, who have long used it both internally and externally in all cases of rheumatism, whether acute or chronic. The crude manner in which the first fabricators prepared the oil, with its rank odour and nauseous taste, effectually deterred any one possessed of a delicate stomach, or laying any claim to sensibility, from adopting a remedy they could neither see nor approach without a shudder: modern science, and a more delicate manipulation, have, however, freed the oil from those objections of sight and smell which formerly militated so greatly against its use.

There are two varieties of cod liver oil now in general use, the one being almost colourless and free from smell, the other of a pale brown colour. Each variety has its particular admirers; but the most universally esteemed preparation is that oil prepared by Mr. De Jongh, who has, unquestionably, brought to great perfection the article vended in his name.

Much of the medicinal virtue of cod liver oil has been supposed to reside in the presence of a large quantity of iodine, either added to, or natural to, the oil, and of phosphorus and other principles. There can, however, be no doubt that it is to the presence of the azote, or nitrogen, that this drug exercises such a beneficial influence on the weak and emaciated system; as we may every day see realized when, in consumptive and debilitated cases, it is administered for the first time, or when it is returned to, after a lengthened discontinuance of its use. In many cases of emaciation and loss of physical stamina, the cod liver oil acts as a stimulant on the enfeebled dram-drinker: *the breathing* becomes freer, the pulse stronger and fuller, the animal spiri lighter and more buoyant, the appetit more regular, the secretions more natural, and, after a few days' steady use the remedy, the hollow features and attenuated frame seem to fill up and expand, till eventually the body acquires roundness and fulness that gives the patient the appearance of having recovere years of his former life. Unfortunately these results are not permanent, for if th oil is too abruptly discontinued, the emaciation and debility returns, and, withou the tonic stimulus of his cod liver oil, th patient declines as rapidly as, under it, h had progressed in health.

The reason why people objected to th cod liver oil prepared thirty years ago will be easily understood when it is know that the livers of the different fishes wer spread on a kind of gridiron, exposed t the heat of the sun and the influence o the air, till *decomposition* setting in destroyed the cellular texture, within which the oleaginous matter was contained, when the fat, made fluid by the heat and incipient decay, ran off into the vessel below. The first step in the way of improvement was to place a large number of the cod livers in a copper partly filled with cold water, light a fire beneath, and, as the heat ascended and broke up the integrity of each liver, the lighter, or oily portion, floated on the top, which was then skimmed off, and afterwards strained. The more recent and improved process is to surround a large vessel, filled with livers, with steam from a heated boiler, the fluid mass obtained being afterwards strained and filtered. The dose of cod liver oil is from 1 to 2 tablespoonfuls once or twice a day, and one of the best vehicles in which to take it, is coffee; and after that, milk, gum water, or water flavoured with orange wine, or syrup of oranges.

CŒLIA.—The belly; a word derived from the Greek. The only compounds of the word used professionally are the CŒLIAC artery—an abdominal vessel, and a branch of the iliac artery,—and the

CŒLIC PASSION.—A severe and painful affection of the bowels and stomach, indicated by dry, colicy pains of the belly, sickness, with great relaxation; and accompanied with a rumbling noise, from the flatulent and distended state of the bowels. Though somewhat resembling dysentery and colic, it is usually distinguished from them by the absence of bile from the evacuations, which are consequently clay-coloured.

The most expeditious mode of treating this disease is to apply hot fomentations to the abdomen, give two compound assafœtida pills, and, an hour afterwards, half an ounce of castor oil, with 25 drops of laudanum, in a little peppermint water.

COFFEE.—This well-known article of beverage is the powder of a small, flat, roasted berry, the fruit of a shrub indigenous to the Arabian peninsula, the *Coffea Arabica*, belonging to the Natural order *Rubiaceæ*.

Coffee is extremely volatile, and holds a large quantity of essential oil, as well as possessing an alkaloid active principle, containing the concentrated essence of the berry, called *caffeine*.

Though possessing medicinal properties, it is seldom that coffee is given or taken for any purposes but those of a dietetic character. Coffee acts on the human system as a tonic, stimulant, diuretic, and antisoporific, as well as being an antidote in cases of poisoning from opium and other depressing articles of a narcotic character. As a beverage, from its warm, aromatic, and stimulating properties, coffee is admirably adapted for the breakfast, though, from its over-stimulating action, it should be sparingly employed whenever there is a redundancy of bile in the bowels, or when the brain and nervous system are much excited; indeed, its inordinate use will frequently induce very serious cerebral excitement. Coffee forms an admirable addition to a vegetarian diet, and answers the purpose of a corrective to a poor and insufficient dietary. As an antiseptic against the dangers of fever, or the malaria of marshes, or any infectious or noxious gases, a cup of hot coffee will be found of signal benefit; and to literary men, and those who have much night-work, coffee is generally the most certain means of warding off the approach of sleep. The most valuable use of coffee, in a medical point of view, is as an antidote against opium and other narcotic poisons, for which purpose a strong, hot infusion, unsweetened, and without milk, is to be given every few minutes, the patient at the same time being constantly moved about. See POISONS.

COHESION.—A chemical term, implying the power by which the components of any body adhere together; and the contrary of expansion.

COLCHICUM AUTUMNALE.—Meadow saffron; a well-known plant, growing in all the dry fields and parks of this country, and belonging to the Natural order *Melanthaceæ*. A very powerful drug, exercising purgative and diuretic properties on the system, now very largely used as a remedy in gout and rheumatism, and being, by some physicians, supposed to act as a direct specific in most cases of gout. Though often acting most beneficially, colchicum not unfrequently produces very serious consequences, and, therefore, always requires to be given with the greatest care and judgment. The principal preparations of this drug are the tincture, wine, and vinegar of colchicum. The dose of each preparation may begin with 15 drops, and be gradually increased to 90 drops, or to 1½ drachms; or in particular cases, 30 drops, or ½ drachm, may be given at once. Colchicum is believed never to produce any beneficial effect on the system unless it first acts freely on the bowels. Colchicum, in some form or other, forms the base of nearly all the quack remedies of liquids, pills, and powders, advertised for the cure of gout or chronic rheumatism. See POISON, and MEADOW SAFFRON.

COLD is a mere relative term, and signifies a less degree of heat, or the absence of a definite amount of caloric. In this sense the term is chiefly confined to the science of chemistry. Cold, regarded as a substance, either in the form of snow, ice, or water at a low degree of temperature, is sometimes used as a valuable agent in the treatment of disease. When employed to reduce inflammatory action, or lower the temperature of the body or a part of the frame, other articles, such as ether and vinegar, are employed—though hot and stimulating in themselves—to produce cold, or suddenly reduce the temperature of a part, by the action of Evaporation, which see.

COLD, A.—A conventional term used generally to express an abnormal condition of the system, analogous to a mild form of influenza, catarrh, or some affection of the respiratory organs or air-passages, accompanied with more or less of hoarseness, running at the nose and eyes, headache, and general lassitude and debility. See CATARRH.

COLD IN THE HEAD.—This is a local form of what may be called an attack of influenza, and without materially affecting the general health, is very frequently a most distressing form of indisposition. The SYMPTOMS are a fulness and oppression of the head, hot and bloodshot eyes, effusion of tears, discharge of thin mucus from the nose, with sore throat and a contraction of the scalp. The **TREATMENT** of a cold, whether attended with constitutional symptoms, such as shivering and diminished secretions, or simply confined to the head, is nearly the same in all cases. This should begin with a warm bath, taken about eight o'clock at night, with a free use of the flesh-brush during the five minutes allowed in the water, followed an hour after by a powder composed of—

Powdered nitre . . .	8 grains,
Opium & ipecacuanha, of each	1 grain,

and succeeded, in half an hour later, by a basin of hot gruel,—the patient, by immediately going to bed, and by extra clothes, endeavouring to get into a copious perspiration. When the bath is inconvenient, a pail of hot water should be carried to the bedside, and when the invalid is undressed, the feet and as much of the legs as can be reached should be hastily plunged up and down three or four times in the hot water, till the limbs appear of a bright red; the water being made as hot as it can be endured without pain. The limbs are then to be hastily enveloped—undried—in a blanket, and the patient, getting into bed, just before lying down should drink half a pint of egg-flip. When the throat is particularly sore, a small piece of sal prunella or of Spanish juice may, in addition to the other means, be placed in the mouth on finally lying down for the night. In most cases the above simple means will be found sufficient, if the water has been hot enough to cause a determination of blood to the feet, and pre-dispose the body to the action of the powder, or the flip, on the skin. When the symptoms are aggravated, and do not yield to the first means, the feet should be immersed on the following evening in hot water, and the following powder taken before the gruel. Take of—

Dover's powder . . .	10 grains.
Antimonial powder .	4 grains.

Mix.

COLD CREAM.—A soft, cooling, and grateful unguent, which forms a very agreeable application for chapped hands, sore lips, or to rub over the face when irritated by cutting winds or by the action of the sun. Much of the cold cream made in the shops is only hogs' lard *washed and scented* with otto of roses. The proper mode of preparing it is t melt 1½ ounces of white wax and drachms of spermaceti with 8 ounces o almond oil; strain through muslin, and pour it into a couple of quarts of boiling rose water in a wash-hand-basin or some large open milk-pan or crock. The liquid oil and wax is then to be slowly beaten with a few slips of cane or clean switches diffusing it freely among the water, and so continued till the rose water becomes cold, and the cold cream, like drifted snow, congeals of a beautiful white o the sides of the vessel. The more it is beaten the whiter becomes the product and the more of the perfume of the rose water will be absorbed: care, however, must be taken not to scatter the liquid oil beyond the sides of the vessel The rose water can always be extemporized by adding 10 drops of otto of roses dissolved in 2 drachms of spirits of wine, and adding it to the 2 quarts of boiling water, and then hastily stirring all together, before pouring in the oil, wax, and spermaceti.

COLIC.—There are few diseases attended with more pain and inconvenience than this comparatively harmless affection; for though its symptoms are very urgent and even severe, colic very seldom proves fatal. Physicians have made almost as many varieties of colic, with a distinctive name to each variety, as there are symptoms to the disease.

Avoiding this unnecessary confusion of terms, we shall confine our remarks to two forms only—that of common colic, and the Devonshire, or painters' colic.

CAUSES of Common Colic.—The exciting causes are extremely numerous, and may be either external or internal. Of the first, the sudden application of a wet or damp portion of clothing next the skin of the abdomen, cold or wet feet, or unbuttoning the coat when violently heated, and admitting cold air to the part, are among the most general of the external causes inducing this disease. The internal are either from partaking of too much unripe or acid fruit, from an accumulation of undigested food in the stomach, acid drinks, an excess of bile in the system, crude vegetable aliment, the eating of poisonous fungi, worms, and from a long costive state of the bowels.

SYMPTOMS.—These consist of an enlarged condition of the lower part of the abdomen, with a retraction or drawing in of the navel, accompanied by an extremely painful twisting and twining motion of the bowels, with a rumbling, flatulent noise, sickness, and sometimes vomiting; and as the hardness and distention of the belly increases, cramps or spasms occur, either in the abdominal muscles, or in those of the thighs and legs.

The only diseases with which colic can be confounded are cholera and inflammation of the bowels. From the first it is distinguished by the absence of diarrhœa; and from the last by the pain being relieved by pressure; and finally, from all painful affections of the abdomen, by the twisting pain at the navel.

Treatment.—In all cases, and from whatever cause the attack has been induced, the first exertions should be directed to subduing the pain. For this purpose the feet should be plunged into hot water, and the front of the abdomen fomented with flannels wrung out of hot water and turpentine, and the following mixture, preceded by an assafœtida pill, given immediately. Take of—

Spirits of camphor . .	20 drops.
Laudanum	40 drops.
Water	1 ounce.

Mix, and add—

Castor oil	6 drachms.

The whole to be taken at once.

If the pain is not relieved within a reasonable time, an injection of half a pint of warm gruel, to which 1 drachm of tincture of assafœtida and 2 drachms of turpentine have been added, should, about two hours after the pill and oil, be thrown up the bowels, the fomentation continued to the stomach, and the feet kept hot with heated bricks. When the pains and spasms are excessive, inflammation of the bowels may be apprehended, and, indeed, sometimes does ensue; in which case it is often necessary to bleed, though the same result can be obtained, without the consequent debility, by giving doses of the following mixture till the pulse is reduced and the pain abated. Take of—

Camphor water . . .	8 ounces.
Powdered nitre . . .	2 scruples.
Tartar emetic . . .	4 grains.
Laudanum	2 drachms.

Mix: two tablespoonfuls to be given every hour for three doses, and repeated every four hours afterwards, if required. As soon as the colic pains have been subdued, it will be necessary to give either a dose of carbonate of soda, or magnesia and soda, if acid in the stomach has caused the attack; a mild dose of colocynth pills if it has been from costiveness; or a blue and colocynth pill if from an excess of bile; or whatever remedy the primary cause of the disease may seem to call for.

Colic is generally confined to that portion of the large intestine called the arch of the colon, and is purely a functional disorder.

COLIC, PAINTERS'.—Lead or Devonshire colic, professionally known as *colica pictonum*. This, the only other variety of the disease to which we shall refer, is a much more serious form of colic than the former, as the symptoms here, instead of being primary, are secondary, and the result of constitutional disturbance.

Colica pictonum is simply so called because it more frequently shows itself among *painters* than any other class of operatives, from the fact that their occupation exposes them more to the influence of lead than other men, the absorption of this metal by the system causing all the special symptoms which have given to the disease its different appellations of painters', lead, and Devonshire colic; the latter name being derived from the cider so abundantly procured in that county, and which, frequently prepared in leaden vessels, induces, from its absorption of that mineral, all the characters of the true disease among those who consume cider as a beverage.

The causes of this variety of the disease arise from the absorption of lead into the system, whether taken into the body minutely dissolved in cider, from the leaden cisterns in which it is fermented; from water passing through leaden pipes and reservoirs; or inhaled into the lungs during the melting and casting of the metal, or, finally, whether taken up by the skin while the man is using the muller to mix the different pigments of lead, or while priming with that most subtle and generally employed preparation, white lead. In whichever way taken into the body, or in whatever form of the mineral it may be, the same process attends all, and the same results manifest themselves in every case—an absorption of the poison by the blood, and its subsequent action on the nervous system.

The peculiarities which define this disease from ordinary colic are—1st, that all the symptoms come on slowly; 2nd, the constitutional disturbance, shown in the languor, headache, loss of appetite, and general irritability; 3rd, the accompanying pains in the limbs, with tremors, or shaking of hands, amounting sometimes to actual paralysis; and 4th, the obstinacy of the disease and its liability to return.

TREATMENT.—This, in a great measure, resembles that of ordinary colic—at least, as far as subduing the primary symptoms is concerned,—and must consist, in the first place, of the warm bath, hot fomentations, injections of gruel and turpentine, and by taking the following pills and a dose of castor oil every other day, after the subsidence of the pain, to carry off the accumulation from the bowels. Take of—

Powdered camphor,	
Powdered opium, of each	6 grains.
Calomel	12 grains.
Extract of henbane .	12 grains.

Mix, and divide into six pills; one to be taken every hour for three doses, and then one every three, four, or six hours afterwards, as the symptoms seem to make necessary. Having relieved the urgency of the case, the next step is to decompose and expel from the body the lead still existing in it. This object will be best effected by giving the patient repeated small doses of elixir of vitriol, in water, beer, gruel, or linseed tea, commencing with about 10 or 15 drops in a small cupful of either of the above liquids three or four times a day. An insoluble sulphate of lead will be formed in the bowels by this means, which the castor oil prescribed above every other day, or a mild aperient three times a week, will carry off. At the same time the body must be braced by tonics, a sponge bath, exercise, and by friction.

As a preventive against future attacks, extreme cleanliness must be enjoined; the necessity of frequently washing the hands insisted on; and the patient told that nothing is more hurtful to the system than for a man, whose duties compel him to manipulate lead in any form, but especially as a paint, to sit down to his meals, or to sleep, with hands unwashed from the dust or stains of his trade. Electricity and galvanism are, however, sometimes necessary to restore tone to the enfeebled muscles of the hands and extremities. See PARALYSIS.

A new and very excellent system of treatment has been lately adopted in the case of this, and other similar diseases, by the aid of mineral galvanic baths, by *which means the metal* absorbed by the body, whether mercury, lead, or an mineral poison, is drawn from it while i the bath, and made to *electro-plate* th surrounding lining of the vessel. Fo this original and admirable mode o treatment, see ELECTRO-GALVANI BATHS.

COLLAPSE. — To fall together, t shrink; a giving way of the vital powers a term used by physicians to express th last stage of certain diseases, in which th circulation and the nervous energy of th system abruptly give way, and the patient is suddenly placed *in articulo mortis*, as in cholera or malignant typhus.

COLLYRIUM.—An eye-water, lotion, or wash for the eyes: a Greek word, signifying any medicine to stop a running or disease of the eyes. Collyriums are of two kinds; one to subdue inflammatory action in the ball or coats of the eye, or the surrounding parts, and the other of a stimulating nature, such as is used in chronic affections of the organ, to excite the vessels to a healthier action. Collyriums are either used cold or warm, according to the state of the eye at the time. The following are a few useful forms of eye-water, arranged according to the action required.

Lotions for inflamed or tender eyes.—Take of—

Sulphate of zinc (white vitriol),	
Sugar of lead, of each .	4 grains.
Rose water	6 ounces.

Mix.

Take of—

Liquor plumbi (extract of lead) . . .	30 drops.
Camphor water, and	
Common water, of each	4 ounces.

Mix.

Take of—

Powdered alum . . .	6 grains.
White vitriol	4 grains.
Water	6 ounces.

Mix.

Any of these may be used in an inflamed state of the eye, or in ophthalmia. Should any one of the lotions, however, excite pain, or seem to be too stimulating, it can be reduced by adding as much water to the quantity put out for use as may be deemed necessary.

Lotions for weak eyes and such as require stimulating.—Take of—

Sulphate of copper (bluestone)	6 grains.
Water	6 ounces.

Mix.

Take of—

Nitrate of silver (lunar caustic)	4 grains.
Distilled water . . .	6 ounces.

Take of—

Sulphate of iron (green copperas)	8 grains.
Elder-flower water . .	6 ounces.

Mix.

The strength of any of these may be increased, when required, by adding 1 or 2 grains of either article on having the lotion repeated, till the amount becomes equivalent to 3 grains to the ounce, beyond which the strength should not be carried. More service will be derived by returning to the original strength, and again gradually increasing the amount of the drug used, than by going beyond the strength of 3 grains to the ounce for a collyrium. See EYE-WATERS.

COLOCYNTH.—Bitter apple or bitter gourd: one of the most useful cathartics in the Pharmacopœia. The plant that yields the fruit from which this valuable drug is obtained is a native of South America, and belongs to the Natural order *Cucurbitaceæ*.

The colocynth fruit is of the size of an ordinary apple, and, when gathered, is peeled, and the apple laid in the sun to dry, the medicinal properties residing in the pith of the inner rind and pulp, which, when sufficiently dried and reduced to a subtle powder, constitutes the article known in the shops as powdered colocynth. Like all drastic purgatives, colocynth exercises a reciprocal action on the bladder, and may be classed both as an occasional diuretic and expectorant. The preparations of this drug kept for medical uses are—the powder; the simple and compound extracts; and the compound colocynth pill, the most useful and beneficial of all. From its sharp action, and the drastic nature of the article, colocynth is never given alone, but always in combination with other drugs, either of a purgative or a carminative nature,—the latter being employed to counteract the pain and griping caused by the bitter apple.

Though an admirable agent in all cases where a brisk action is required on the bowels, it is in cases of dropsy or affections of the head, and where watery evacuations are required, that colocynth becomes of the greatest value; for when combined as in the following manners, its results are rapid and effectual.

Strong Cathartic Pills for Dropsy.—Take of—

Powdered colocynth .	24 grains.
Powdered gamboge .	18 grains.
Powdered aloes (Barbadoes)	24 grains.
Calomel	12 grains.
Essential oil of cloves .	6 drops.

Mix thoroughly, make into a mass, and then divide into twelve pills; one to be taken for a dose, and repeated every two or three hours, according to the urgency of the case for which they are given. The same results may be obtained by exhibiting it in the form of a powder.

Take of—

Powdered colocynth .	6 grains.
Cream of tartar . . .	1 drachm.
Powdered jalap . . .	1 scruple.
Calomel	12 grains.
Ginger powder . . .	10 grains.

Mix completely, and divide into three powders; one to be taken as a strong and quickly acting purgative, and repeated in three or four hours if called for.

When a general and effective action of the whole alimentary canal is required, the colocynth should be combined with jalap, aloes, scammony, and rhubarb, in the proportion of 1 grain of each, when a pill will be produced at once expeditious and effective.

One of the most useful preparations of this drug, and one very frequently prescribed in this work, is the compound colocynth pill, which, when freshly and properly made, is always safe, easy, and expeditious, and may be taken with equal safety by females as by males.

In excessive doses colocynth produces violent abdominal pain, and great constitutional exhaustion.

COLOMBO.—A bitter tonic drug, extensively used as a stomachic, both in the form of a powder and tincture. See CALUMBA.

COLON.—The name of the central and the largest portion of the large intestines.

The colon commences at the *cæcum*, and, ascending up the right side of the abdomen, crosses in front of the stomach, and then descending on the left side, after a zigzag curve terminates in the rectum. In this course the colon receives the additional names of the *ascending* colon, *descending*, *transverse arch*, and *sigmoid flexure* of the colon. For the anatomy and function of the colon, see INTESTINES.

COLOSTRUM.—A name given to the first lacteal secretion after confinement; the thin, saline, and laxative milk formed in the mother's breast after every delivery, and intended by nature to act as an aperient on the infant, and cleanse its stomach and bowels, and prepare both for the richer aliment secreted by the breasts on the following days. See MILK.

COLPOPTOSIS.—An obsolete term for a falling down of the entrance of the womb; a prolapsus of the vagina.

COLTSFOOT.—A well-known popular herb, indigenous in this country, highly esteemed for its expectorant and demulcent properties, and largely used in bronchial and pulmonary affections, and in cases of chronic asthma. The general mode of using this herb is in the form of a sweetened decoction, one or two handfuls of the leaves being boiled slowly, with the rind of an orange or lemon, in a quart of water, down to a pint, a sufficient quantity of brown sugar or sugar candy being added to make it palatable; the whole is then strained, and, when cold, from one to two tablespoonfuls are to be given for a dose every four, six, or eight hours, according to the urgency of the cough, difficulty of breathing, or oppression at the chest. The syrup of coltsfoot is prepared by boiling 6 ounces of coltsfoot leaves, 2 ounces of maiden's hair, and 1 ounce of hyssop and the same of liquorice root, in four pints of water, down to *one* pint, straining the hot liquid, and adding 2 pounds of lump sugar; it is then clarified with the white of eggs, strained again, and, when cold, from a dessert to a tablespoonful given for a dose as often as required. The dried leaves of coltsfoot are frequently used, either alone, or with stramonium and other herbs, as a tobacco, to be smoked by patients in asthma.

COLZA OIL.—An inflammable oil extracted from the seeds of a variety of the cabbage plant, but only used for lamps, and to make an inferior kind of soap.

COMA.—A state of drowsy insensibility, in which the patient, as if overcome by a deadly sleep, is incapable of being roused. Coma, though frequently the result of a congested state of the brain, as in apoplexy, may arise from the narcotic influence of opium, hemlock, belladonna, and other drugs acting on the nervous system; from large quantities of *spirits taken* into the stomach; or the formation of abscess on the brain, and the effusion of pus or serum on the surface of that organ; or it may proceed from injury to the skull or head, as from falls, blows, &c. Coma, in whatever state found, is always a mere symptom, its treatment falling under that pursued in apoplexy, poisoning by narcotic drugs, and in Accidents to the Head, which see.

COMMINUTED.—Anything broken very small. A comminuted fracture is when a bone, by means of a heavy wheel passing over it, or some other cause, is broken into minute splinters. Such accidents, especially when occurring to the hip and thigh, are very serious; generally resulting in amputation, and frequently in death. See FRACTURE.

COMMISSURE.—An anatomical phrase, signifying a seam or fold in a membrane, as in those of the brain, forming a process which, depending into the substance of the brain, separates the right from the left hemisphere. See DURA MATER.

COMPRESS.—A piece of folded linen or lint, of a thickness proportionate to the purpose required, and used either to lay over the opening made in the vein in bleeding (see BLEEDING), or on the top of dressings, to establish, with the bandage, a pressure upon any particular part.

COMPRESSION. See CONCUSSION.

CONCENTRATED.—Condensed into a small compass: the active principle or ingredient of any article or drug.

Concentrated essences are medicinal preparations in which the strength of the medicine is so condensed, that a few drops mixed with half a pint of water yields a compound possessing all the usual strength of that quantity of an infusion or decoction, with this advantage, that a mixture can be thus instantly prepared which in the usual course would take hours to effect. Quinine and morphia, the active principles of bark and opium, are, in this sense, concentrated essences of those drugs.

CONCHA.—From the Latin for a shell; the winding cavity in the temporal bone, forming a portion of the organization of the inner ear. See EAR.

CONCOMITANT.—A medical term used to express an accompanying symptom or affection usually found attending certain diseases, or happening at the same time.

CONCRETION.—A growing together

the name given to those saline formations engendered in the bowels, and known as intestinal calculi. See CALCULUS.

CONCUSSION.—A shaking together. This term is generally confined to an injury sustained by the brain, and one of the most serious accidents to which the head is subjected, and is very often combined with compression.

The CAUSES of concussion are very numerous; a slight accident, such as the slipping off a step, may produce it as effectually as the violent collision of two railway trains. It may also be induced by a blow, a fall, or anything that violently shakes the body.

SYMPTOMS.—These differ with the violence of the cause, and are in proportion to it. Usually all sense and power of motion are instantly suspended, the pulse is reduced to a thread, the breathing is imperceptible, the pupil dilated, and the body cold.

All cases of complete concussion are divided into three stages;—in the 1st, there is total insensibility—the patient cannot feel the pinching of his skin, or hear the loudest noises, though made at his ear; the pulse intermits, and the extremities become cold. In the 2nd stage, the pulse is a little more regular, the breathing more evident, a slight degree of warmth is diffused over the body, the skin becomes slightly sensible to pain, and the patient can hear, but is inattentive to sounds unless bawled into the ear, when he will reply for an instant if the question concerns his sufferings; if not, he answers incoherently. The 3rd stage is indicated by the passing off of much of the stupor and insensibility, and the setting in of the inflammatory stage, always the most critical of the three. Vomiting generally succeeds a concussion of the brain, and the contents both of the bowels and bladder are at different periods passed unconsciously. In some cases, the patient, after a few hours' insensibility, recovers entire consciousness, the body being restored to complete health without one adverse circumstance; in others, the coma and insensibility endure for a dozen or fourteen days, and the patient is ever after affected with a partial or complete loss of memory, or an irritability of stomach that defies all ordinary treatment.

TREATMENT.—The only other affection of the head—always remembering the exciting cause—that can be confounded with concussion is *Compression* on the Brain; and as the treatment of each *is diametrically opposite in its first stage*—that which would be judicious in the one being fatal to the other,—great care must be taken to discriminate between the two.

Concussion is generally distinguished from *Compression*, by the absence of stertorous breathing, and the open or dilated state of the eye. But as any interference with the patient while in the first, or insensible stage, would be highly dangerous, he must be left till reaction sets in, and nature begins to reassert her empire, by the freer breathing, increased warmth, and returning consciousness. To expedite this certain effort of nature, it was formerly the custom to give stimulants, or, rather, force them down the passive throat; but as this was generally found to increase the danger of the third stage, it has very properly been discontinued, and bottles of water, or hot bricks, applied to the feet and body of the patient, is now all, except in rare cases, that is done till the inflammatory period sets in, when bleeding both from the system and the head, cold applications to the scalp, hot bricks to the feet, a low and unexciting diet, with a dark room, absolute repose, and solitude, become the sole means and remedies by which we have any chance of restoring the patient to his former health.

Though bleeding is the chief agent on which the medical man depends for the recovery of his patient, the greatest judgment is necessary in knowing *when*, and *how much* blood to take away; for, should he bleed *before reaction has set in, and some amount of consciousness is restored, he is morally certain to extinguish the life of his patient.*

COMPRESSION or Pressure on the Brain often accompanies, or instantly follows, concussion, and may be induced by many of the same causes; or a severe blow, by rupturing an internal vessel, may cause a pressure on the delicate organ by the effusion of blood over its surface; or a blow, kick, or fall, by driving a piece of the fractured skull on the brain, may produce a most serious form of compression.

SYMPTOMS.—These are in many respects the same as those to be found under apoplexy, and begin with insensibility, loss of sensation and hearing, accompanied with deep, stertorous breathing; cold extremities; a low, oppressed pulse, and *contracted* pupils; with a pallid countenance, except in apoplexy, when the face is suffused and the white of the eyes frequently bloodshot.

Compression is thus of two kinds—that produced by an effusion of blood, serum, or pus, on the brain, and that resulting from the pressure established by a portion of the skull driven on, or into, the substance of the brain. The

Treatment, in the first of these forms, consists in bleeding freely from the arm or temporal arteries, applying a blister to the nape of the neck, with strong purgative medicines; cold applications to the head, and hot ones to the feet, with a low or antiphlogistic diet and regimen. See Apoplexy, Treatment of.

CONDIMENTS.—Sauce, seasoning, anything that adds savour or flavour to food, is regarded as a condiment. The only natural condiment, sought after as much by animals as by man, is salt. Civilization, however, has greatly increased the number of these provocatives to appetite, till they not only embrace all the peppers and spices, but include sugar and other saccharine substances. Salt, however, whether combined with animal or vegetable substances, forms the base of most of the really valuable condiments. In moderation, most of the condiments promote digestion, improve the appetite, and conduce to the general health of the body; but with persons of a naturally weak stomach, condiments require to be taken with great care, and hot, stimulating articles, such as curry, should be carefully avoided.

CONDUCTOR.—A grooved instrument, used by surgeons in operating for stone. A conductor is a bent steel implement, like a catheter in size and shape, sometimes called a staff, or sound, with a channel running down its centre.

CONDYLES.—The epiphyses or knuckle portions seen to protrude on some of the long bones. The most prominent of these condyles is that at the inner side of the elbow, on the bone of the arm, a blow on which produces such a benumbing sensation. It is this process that is so frequently fractured with young children, as, till 10 or 12 years of age, the condyles are seldom completely ossified, being merely attached to the bone by cartilage.

CONFECTION.—By this word is understood some soft, sweet composition used in medicine, either to make powders into pills, or mix with some vehicle to form an emulsion. The most important of these compositions are—the confection of almonds, *confectio amygdalarum;* aromatic confection, *C. aromaticum*, used in diarrhœa; lenitive electuary, *confectio sennæ*, an agreeable aperient; and conserve of dog-roses, or heps, *confectio rosæ caninæ.*

CONFLUENT.—Running together; a term used to express the worst stage of small pox, in which several pustules run together, making one large poc, and subsequent pit or cavity. The term is only used in relation to Small Pox, which see.

CONGENITAL.—Born with: any malformation, blemish, or mother's marks, as they are sometimes called, with which a child is born, is denominated congenital. Congenital weakness is an impaired or debilitated constitution, such as a scrofulous taint, handed down from parent to child. For marks, malformations, and other congenital disfigurements, see Mother's Mark, Nævus.

CONGESTION.—A fulness or excess of blood in any part, more than necessary for the healthy performance of the function of the organ, is called a congestion. See Apoplexy.

Though a congestion may occur in any organ, the parts most frequently subject to this state of disease are the brain and the lungs. When attacking the former, it is, when sudden, called apoplexy; when the latter, pneumonia. Congestion of any organ, if not soon relieved by proper means, is apt to terminate in inflammation and suppuration. For the general treatment of this disease, see Apoplexy and Inflammation of the Lungs.

CONGIUS.—The Latin for a gallon, liquid measure, consisting of four imperial quarts, or eight pints of twenty ounces each.

CONGLOMERATE.—Heaped, or bound together. A medical term applied to a natural or diseased condition of some of the glands of the human body, in which the mass or organ appears composed of a number of irregular lumps, or small glandular formations, united or bound together by cellular or other tissues. In a natural state, the pancreas, or sweetbread, is the best example of the conglomeratic gland, though in a diseased condition it presents many and various forms of a heaping together, or conglomerate state of the abnormal structure.

CONIUM MACULATUM.—Hemlock, which see.

CONJUNCTIVA.—The white of the eye; the external coat of the ball of the eye, sometimes called the *adnata.* It is

membrane that the capillaries,
blow, accident, or inflammation
organ, carry *red* blood, and
rhat is called bloodshot. See

ERVE.—A sweet confection of
licinal herb or gum-resin, pre-
th gum and sugar. The most
t of this class of medicinal pre-
is the conserve of dog-roses, or
nmonly called the conserve of
e CONFECTION.

CIPATION.—A thickening, or
ore solid. A confined state of the
he result rather of some sudden
of the mind than any regular
ause.

ness is sometimes habitual, when
ls will seldom act without ex-
—a torpid state, proceeding from
tone or power in the muscular
e bowels. In cases of this sort,
e confinement is habitual, it is
improper to force the bowels
n by means of purgative medi-

e of the lower extremities by
running, eating brown bread, and
natural means and aliment, will
l much more judicious than
on every occasion to the debili-
stem of pills, castor oil, and such
dies. When medicine, however,
aken, a tablespoonful of lenitive
(confection of senna) will be
e most useful and convenient
that can be prescribed, together
rm bath and the flesh-brush.

UMPTION. — This word is
om the Latin verb *consumo*—to
waste away; and never did a
ress the consequent ravages of
more truthfully and more aptly

a popular and most expressive
re is not a more unscientific or
s denomination applied to any
the whole medical nomenclature
of consumption,—a title based
an effect, without the slightest
to the nature of the disease, or
ne of its symptoms. The ema-
the body which follows mesen-
ctions in childhood, pressure on
ic duct, the reduced bulk of the
ever, and the ghastly attenuation
lows long privation and atrophy,
s entitled, from their results, to
consumption as the disease so
ly understood by that name.

nption, or PHTHISIS *PULMONALIS*, or a wasting of the lungs, as it is denominated by medical men, has been, till within the last twenty years, one of the greatest reproaches on the profession, which, incapable of grasping the disease in its entirety, or treating it on broad scientific principles, has contented itself with palliating some of its more urgent symptoms, and, declaring the evil to be beyond the aid of art, has stood calmly by with folded hands, while death stalked unchecked through the ranks of its prey. With the brief exception we have just referred to, consumption, for the last century and a half,—in this country at least, —has been literally given over by the doctors, no physician boasting of his cures, no medical man hoping to effect any; at the same time, the practice adopted as a palliative for the symptoms has either been characterized by the most bigoted routine, or marked by reckless indifference.

The openly declared opinion of the profession, that consumption was naturally mortal and physically incurable, has had the most injurious effect both on the profession itself and the public; for such a dictum at once destroyed all emulation in the youthful practitioner, in whom the constant iteration by his seniors of the incurability of phthisis naturally crushed all further investigation of the disease, or study of the pathology regarding it, as a mere waste of time; the youthful physician soon joining the ranks of the followers of routine, and thereby augmenting the number of fatality believers. Upon the public, this dictum of the profession had the most serious consequences, as with the name of the disease came the crushing out of hope, and whole families were given over to despair and an untimely death.

There can be no question that to this depressing conviction on the mind of the public is to be attributed much of the frightful mortality that annually attends this disease. The physical causes that predispose to consumption have not increased within the last fifty years; nay, under better ventilation and drainage they have diminished, while the general spread of scientific information has materially tended to a better and healthier mode of living. Yet still, under the nightmare of a *hopeless doom*, consumption strides unchecked through the land, and every year leaves the fearful total of *sixty* or *seventy thousand* deaths.

At the beginning of this century, a celebrated French physician, Laennec, being himself predisposed to consumption, devoted much—indeed, the greater part—of his time and study to an investigation of a disease which he felt sure would greatly abridge his natural term of existence. To this truly great man medical science is indebted for the stethoscope, and that code of rules based on its employment which has since given rise to the branch of medical knowledge called Auscultation —a mode of interpreting sounds by the motion of the air in its passage to and from the lungs,—an instrument which becomes of the utmost importance as a means of demonstrating the various diseases of that delicate organ, being, in fact, the alphabet and key to the study of the science of auscultation. See STETHOSCOPE.

Other medical men of eminence, both in France and England, succeeded Laennec, and, borrowing his ideas, soon developed more just and scientific opinions as to the seat and character of consumption, and, as a consequence, a more rational style of treatment.

But although more correct views are now generally entertained, both as regards the pathology and the management of the disease, there still remains among the great bulk of the profession the same hopeless belief in the efficacy of any remedial agents that may be prescribed for it, consumption to them being regarded as *incurable*, medicinal regimen and change of climate being considered as palliatives only. It must be allowed, however, that there are some practitioners —a small and select few—who take a very different view of this disease, and not only maintain that consumption *is curable*, but that nature is perpetually waging an antagonistic war against this dreaded malady, and that by a close observation of those efforts, and carrying out the principles they inculcate, pulmonary consumption becomes as amenable to science as any disease in the medical catalogue. So just and theoretically correct are the facts deduced by the supporters of this side of the question, and so conclusive their practical example, that it would be a grave fault in such a work as this to omit so important a subject. We propose, therefore, in the first instance, giving a full account of consumption, and what is regarded as the orthodox mode of treatment; and then, in conclusion, the reasons for, and the method of, treating consumption as curable, merely premising that, unfortunately for the cause of medical science, the profession generally regards all who entertain a belief in the curability of phthisis as little better than pretenders of the healing art, or, in other words, empirics.

The *anatomical characters* developed by phthisis pulmonalis, in the different stages of the disease, are, in the first instance, an inflammatory condition of the lining membrane investing the lungs, resulting in the formation of miliary or millet-shaped granulations, scattered over the surface, and eventually invading the texture of the lungs. These granulations in time become tubercles, filled with an opaque, yellowish-white fluid, or pus; which, in accordance with the time the disease has lasted, or the severity of the symptoms, is infiltrated through the entire structure of the organ, though principally found on the *upper surface* of both lobes, and more extensively in the *right* than left lung. As the disease still further advances, ulcerations take place in the *larynx* and *trachea*, and sometimes are found even in the intestines; the liver also participates in the morbid action—becomes enlarged, or changed both in appearance and consistency, and, like the lungs, kidneys, and other organs, has tubercular formations scattered on its surface.

The CAUSES that predispose to consumption are, generally, an hereditary predisposition; scrofula; a peculiar formation of the body, such as a narrow chest, high shoulders, projecting collar-bones, a long thin neck; and a sanguineous temperament, indicated by a clear skin, black hair, dark eyes, sallow complexion, and great nervous sensibility. The immediate or exciting causes are extremely numerous —a severe cold, inflammation of the lungs, small pox, measles, long exposure to bad or noxious air, an insufficient dietary, inhaling the subtle dust or fine metallic particles given off in certain trades, as among millers, needle-makers, a long-continued diarrhœa, prolonged suckling, spitting or vomiting of blood, sudden cold applied to the body previously heated, or any long-sustained or violent emotion of the mind.

SYMPTOMS.—These commence with lassitude that soon amounts to weariness after the slightest exertion; a short, dry cough, so slight as seldom to attract attention till it has grown to be habitual; the breathing becomes quick and short upon the least bodily exertion; languid debility, and loss of appetite soon follow, while the cough, excited by every change of atmosphere, becomes more severe and troublesome, particularly at night-time, when the symptoms assume a hectic character. Shooting pains are felt across the chest, which feels tight and constricted, while the breathing is either oppressed or attended with pain and difficulty. A heavy pain is felt between the shoulders, or under the blade-bones. The expectoration at first consists of a thin, frothy mucus; this, however, gradually changes its features, becomes more free and abundant, and, by degrees, thicker and darker, and after a time, purulent, often tinged or streaked with blood. The debility keeps pace with the disease, till the least exertion causes flushes, perspiration, and exhaustion; at the same time the emaciation progresses steadily, the thorax seems to contract, causing the collar-bones to stand so far forward as to leave deep pits or hollows between them and the first ribs. A settled pain is felt behind the breastbone, or on one or both sides of the chest, which is increased by every fit of coughing to a degree of such severity as to prevent the patient from lying on either side.

The evening flushes and accession of the pulse, now begin to assume the regular symptoms of hectic fever; the face is tinged with a brilliant flush, the eyes are dilated and bright, there is a constant thirst, the palms of the hands and the soles of the feet are affected with a dry, burning heat; the water is high coloured, and throws down a bran-like sediment; the tongue, *originally* white, becomes of one steady colour, clean and *red*. The hectic fever from this time has two exacerbations, or paroxysms, every day—one, the mildest, about noon; the other, and most severe, about eight in the evening, increasing from then till after twelve at midnight, and terminating in a copious perspiration, when there is a remission for some ten hours. Towards the concluding stage of the disease, the appetite often improves, and the patient can eat freely, and with enjoyment; the white of the eyes becomes unnaturally clear and pearly, while the settled redness of the cheeks increases the hollow and anxious character of the countenance. At length the cheeks sink in, cavities are developed on the temples, the eyes appear to recede in their orbits, the stomach refuses its office, and the food is ejected by vomiting; the hair falls off, the legs swell, leaving pits when pressed, as in dropsy; and the patient finally sinks from physical exhaustion: or sometimes the *appetite* returns, all pain ceases, and a few nights of undisturbed sleep afford such promise of amendment, that, in the hope of recovery, the patient plans schemes for an early change of climate, when, without a moment's warning, a trivial cough ruptures some pulmonary vessel, and with a gush of blood, he sinks back on his bed a corpse. The mind suffers with the body, and is at one time greatly depressed, at another elated with expectation, and, losing all healthy balance, is constantly alternating between hope and fear.

Consumption assumes so many special differences, according to the characteristics of the patient, and is so frequently complicated with rheumatic affections, scrofula, and other diseases, that it is difficult to embody in one list all the symptoms displayed.

The pulse in phthisis is, as a rule, small, quick, and sharp, and exceeds the natural standard of health. The *sputa*, or expectoration, in consumption should be carefully noted, as in the course of the disease it assumes many forms and appearances. At first it is thin and frothy; it then becomes more solid and dark—a discoloured phlegm; the next change is to a mixed condition, partly phlegm and partly matter—muco-purulent; after a time it becomes entirely purulent, when it sinks in water; in this form it is sometimes mixed with white, cheesy matter, or with shreds of the pulmonary tissue, or streaked with blood. At other times it is simple pus, and of a colour varying from grey to yellow, green, or brown.

The pearly whiteness of the eye, the clean red tongue, the long thin fingers, with the blue curved nails, are a few of the reliable special signs that indicate the presence of phthisis, however it may be complicated with other affections.

TREATMENT.—In incipient phthisis, or the earliest stage of the disease, a period when the physician is very rarely consulted, there are three objects to be attained:—1st, to promote absorption of the tuberculous matter; 2nd, to subdue local inflammation; and 3rd, to improve the general health. To effect the first of these, some physicians slightly salivate by small doses of kino and calomel; others effect their object by means of the hydriodate of potass, in mixtures, and by inhaling the fumes of iodine in hot water. The second object is effected by small bleedings from the arm, or leeches on the chest, or by the tartar emetic ointment, as a counter-*irritant*. And the third, by a proper wholesome diet, exercise, change of air, a sea voyage, and cold spongings of the body, with friction.

The treatment in confirmed phthisis, or when suppuration has taken place—for by consumption is understood *the deposition of tuberculous matter in the substance of the lungs*,—embraces four objects:—1st, to facilitate the discharge, by expectoration, of the suppurated matter; 2nd, to subdue any local inflammation present; 3rd, to relieve the most distressing symptoms; and 4th, to support the patient's strength.

1st, *To facilitate the discharge.*—In the very earliest stage of the disease this result may be effected by means of an emetic, given early in the morning for a few times; but unless adopted at the commencement, the vomiting will cause too great a prostration of strength to warrant its employment. In that case, one of the following powders, from either of the three prescriptions, is to be given every morning, till the expectoration becomes free and easy.

No. 1. Take of—

Powdered sugar . . .	1 drachm.
Tartar emetic . . .	6 grains.

Mix; divide into twelve powders.

No. 2. Take of—

Powdered nitre . . .	36 grains.
Powdered ipecacuanha	50 grains.
Powdered sugar . . .	1 scruple.

Mix, and divide into twelve powders.

No. 3. Take of—

Sulphate of zinc . . .	1 drachm.
Cream of tartar . . .	1 drachm.

Mix, and divide into twelve powders.

The best time to take these powders is about eight o'clock every morning, each one being mixed in a spoon with a few drops of water.

2nd, *To subdue local inflammation.*—This intention will be best carried out by the application of from three to six leeches applied on the top of the chest, or over the part where the pain is most acutely felt, followed the next day by the use of the following counter-irritating ointment. Take of—

Spermaceti ointment, and	
Hog's lard, of each . .	½ ounce.
Tartar emetic	2 drachms.

Mix. The fourth part of this ointment to be rubbed into the chest across the upper part, for about ten minutes, the day after the leeches, and a small quantity repeated in the same manner night and morning, till a plentiful crop of pimples *breaks out over the* part rubbed, when the ointment is to be discontinued for a time. After a few days, these hard pimples are large, become vesicles filled with a pale straw-coloured liquid, having flat, depressed tops, and presenting all the characters of the small-pox eruption. When these vesicles break, discharge their fluid, and finally fall off, which will occur in about eight or ten days, the chest is to be washed and well rubbed; and if the symptoms of tightness and oppression continue, the ointment must be applied again, till a second crop of pimples has run through its course, and if necessary, afterwards applied for a third or a fourth time.

3rd, *To mitigate the most distressing symptoms.*—These are generally the hard exhausting cough; the hectic symptoms or colliquative night sweats; obstinate diarrhœa, and hemoptysis, or spitting of blood. For the cough, the following mixture and pills may be taken with every chance of benefit. Take of—

Almond confection . .	4 drachms.
Mint water	enough to

make 8 ounces. Rub down and make a smooth emulsion; then add—

Extract of hemlock .	1 scruple.
Syrup of tolu	½ ounce.
Laudanum	1 drachm.

Mix: take a tablespoonful every three, four, or six hours, and one compound squill pill every night and morning. Or the following cough mixture may be substituted for the above, or alternated with it. Take of—

Gum ammoniacum . .	1 drachm.
Nitrate of potass . .	2 drachms.
Camphor water . . .	8 ounces.

Rub down till a smooth, creamy mixture is made, then add—

Tartar emetic . . .	4 grains.
Acetate of morphia . .	1 grain.

Mix. To be taken the same as the other, accompanied by the squill pills night and morning. The hot flushes and night sweats are to be relieved by sponging the body with cold vinegar and water, and by the use of acid drinks, such as adding to a tumbler of barley water 10 or 12 drops of the elixir of vitriol, or 5 drops of nitric acid. For the diarrhœa, should not a change of diet, and the forbidding of all solid matter to the stomach, have checked this exhausting symptom, a mixture made by rubbing down 4 drachms of chalk, 2 drachms of magnesia, 1 drachm of aromatic confection, in 6 ounces of peppermint water, may be given in doses of two tablespoonfuls three times a day till relief is obtained; or a teaspoonful of tincture of kino may be substituted night and morning in a wineglass of water. The spitting of blood, though often a very formidable symptom, sometimes produces more alarm than actual danger; it is therefore necessary to arrest it at once; for this purpose, the subjoined pills should be taken, each pill being washed down by a copious draught of buttermilk, or else weak vinegar and water. Take of—

Sugar of lead	2 scruples.
Opium, powdered . .	2 grains.
Kino, powdered . . .	10 grains.

Mix; make into a mass with extract of dandelion, and divide into twelve pills; one to be taken every two or three hours. No danger can accrue from this, or double the above quantity of sugar of lead, so long as the buttermilk or weak vinegar accompanies each dose. Sometimes the pulse becomes very quick and sharp, and accompanied with painful palpitations, causing great uneasiness. In such cases it is often necessary to give from 5 to 10 drops of tincture of digitalis, to reduce the heart's action, repeating the dose as required.

4th, *To support the patient's strength.*—The first and most important agent is a nourishing diet, *but without stimulants*, such means never being called for except in the last stage of the disease. The diet in all cases must be light, nutritious, and easy of digestion, care being taken to supply the stomach with food every four or five hours.

Next to a judicious dietary is change of air and climate, but only in the *early* stage of the disease. The sending a consumptive patient, in the last stage of the disease, to a warm climate, is an act of gross inhumanity both to the sufferer and his friends, and of culpable ignorance on the part of the physician who recommends it. The places most suited to a patient in England, and to which he may go without absolute danger in all but the last stage, are the south and south-west coast; and in the first stage, to the south-west of France on the Continent, and the Madeiras in the Atlantic, when a sea voyage may be safely taken. (See CLIMATE.)

It would require half a number of this work to give an account of all the remedies which have been used and highly recommended in the treatment of phthisis. Among those articles used for the supposed efficacy of their fumes are stramonium, hemlock, tobacco, hemp, foxglove, aniseed, cumin and some other *seeds,* benzoin and *camphor, either mixed or* alone, and smoked in a tobacco pipe. Inhalations of ether, iodine, chlorine, hydrogen, and hydro-carbon, with creosote, and the vapour of tar, have all been strongly recommended, and have been occasionally very serviceable as remedial agents. Another set of agents strongly recommended, and sometimes affording benefit, are—hydrocyanic acid, all varieties of mineral tonics, salts, and acids; vegetable tonics, such as quinine; and the stimulating properties of chalybeate waters. The system adopted by Laennec and Louis, the celebrated French physicians, of giving immense doses of tartar emetic, has found numerous followers in this country, such prescriptions as the following being an ordinary form of exhibiting this active medicine, where the urgency of the cough has to be corrected. Take of—

Infusion of colombo .	6 ounces.
Tartar emetic . . .	1 scruple.
Laudanum	60 minims.

Mix: two tablespoonfuls being given every four or six hours. Among the most approved dietetic remedies are to be classed the Iceland and Irish mosses, which, boiled with lemon peel to a concentrated strength, are then sweetened and cast into moulds, and eaten when cold, like ordinary jellies. Next in estimation follows the calf's-feet jelly, and, in cases of great exhaustion and emaciation, basins of boiled milk and suet, eaten with bread for supper every night, is a diet extremely popular. Upon the same principle, Cod Liver Oil is now almost universally employed in the emaciation stage; and where the stomach is capable of fully digesting it, there can be no doubt but cod liver oil, like the boiled suet, does often effect very great benefit in helping forward the replenishing of the system, when worn down by this disease.

As prophylactic or preventive means to ward off this dreaded malady from an infected family, a good, wholesome, and plentiful dietary, warm clothing, exercise, especially such as expands the chest, cold sea bathing, with a free use of the flesh-brush, frequent declamation, the avoidance of all colds or sudden changes of temperature, and, if possible, a lengthened residence in a warm, dry climate, such as Australia or the East Indies, afford the most probable means by which to escape the consequences of a natural predisposition.

The general belief among the profession is, that though the disease sometimes *cures itself*, it is impossible to effect a cure *by art;* and that when once tubercles have been formed, and suppuration is established, medicine can do nothing beyond palliating some of the most distressing symptoms.

CONSUMPTION CURABLE.—The principle upon which all the advocates of the curability of phthisis base their treatment is founded on the acknowledged fact that *nature frequently effects a perfect cure* of this disease, even when far advanced, by setting up an *antagonistic disease*—the more threatening, or greater evil, conquering the lesser; while in other and less successful cases, there has been a complete arrest of the complaint, which has continued for a longer or shorter period. In the former instances, some species of malformation in the mouth or air-passages has been induced, which, by equalizing the balance between the admission of air and the condition of the lungs, effects, by mechanical means, a cure. In the latter, a sudden cold, by producing a thickening of the mucous lining, and the pregnancy of a female patient, will, either of them, effectually arrest the progress of consumption, till after confinement in the one case, and the restoration of voice by the cure of the thickened membrane in the other, once more brings the slumbering disease into active operation. It is on the knowledge of these *antagonisms* to the disease of consumption that the whole system of cure is based, and that tubercular cavities, when they exist in the substance of the lungs, have any chance of being closed or cicatrized—that cicatrization being effected by enlarging the volume of the lungs themselves.

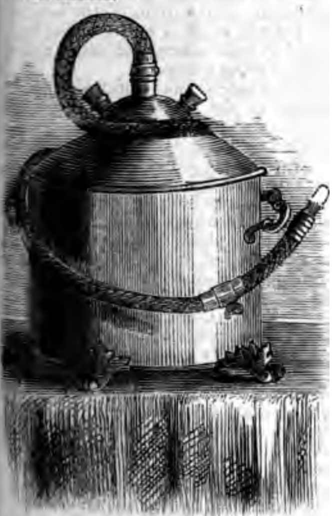
Among the most important of nature's antagonisms must be enumerated catarrh, chronic asthma, enlarged tonsils, bronchocele, tumours in the throat, polypi in the nostrils, and whatever impedes the free expiration of the air from the lungs.

Before explaining the *reason* on which these various prophylactics act, we must observe, in the first instance, that in consumption the lungs are not fully or equally inflated, the proper and natural relation between the two powers of *inspiration* and *expiration* being destroyed, the air-passages becoming too wide for the diminished volume of the lungs. Whatever, therefore, by diminishing the compass or capacity of the air-passages, assists to restore the natural relation between the lungs and windpipe, thereby contributes to arrest the progress of the disease. A catarrh, or common cold, or an attack of asthma, in thi manner, by producing a thickening of th lining membrane of the larynx and windpipe, materially diminishes the circumference of the passage, and consequent less air reaches the lungs, from the diminished capacity of the tube. Enlarge tonsils, by contracting the space at th entrance of the larynx, answers the sam purpose; while a goitre, or any oth tumour, on the front or side of the windpipe, by pressing on that tube, contract it in some part of its course, effectin exactly the same purpose. And lastly polypi forming in the nostrils almo entirely cuts off one collateral source respiration, and thus each of these caus by overcoming one of the most serio results of consumption,—an air-shaft to wide for the diminished volume of th lungs,—tends to restore the equilibri and arrest the progress of the disease.

The same cause that beneficially allows less amount of air to reach the lungs a still more usefully by preventing the from escaping so quickly by expirati from the organ, thereby allowing t lungs to be more fully dilated in all the parts; for the more fully they can be inflated at each inspiration the great chance is there—nay, the greater certain —of a radical cure being effected, even natural means. As the lungs beco gradually expanded, the diseased parts cavities become pressed against the sou portions, or against the bony constructi of the thoracic cage formed by the [illegible] and breast-bone, and are consequ placed in a position favourable to [illegible] zation, or union by the first [illegible] and ultimately effecting a compl[illegible] a result that every medical man [illegible] many opportunities of satisfying [illegible] of in *post mortems* made on persons [illegible] have died from some other cause, [illegible] where abundant traces were left [illegible] where a formidable pulmonary [illegible] once existed. The practitioner [illegible] consumption as *curable*, without [illegible] ating the use of leeches, blisters, [illegible] or the internal aid of medicine, [illegible] scious that, *alone*, these means will [illegible] effect the result aimed at, and [illegible] nature does not assist his efforts by catarrh, or enlarged tonsils, or other tagonism, he invents one for hims that antagonist to mortal phthisis, he found in the instrument shown in annexed cut.

By the mechanism upon which this lit apparatus is constructed, the patient enabled, by placing the tube in his mouth, and closing the nostrils, to inhale a slow and steady stream of air into his lungs, sufficient to distend every cell in every lobe, while by slowly expiring through the same mouthpiece, the air can only escape in that guarded and just ratio, as shall prevent the collapse of the organ which usually follows expiration through the disproportioned trachea. The respirator must be used at first for ten minutes at a time thrice a day, till by practice it can be increased with perfect ease to half an hour on each occasion.

In all cases, the circumference of the chest under the armpits should be measured before beginning its use, for in less than a month in many cases, and in five weeks in most, an enlargement to the size of at least an inch will be found to have taken place. Every subsequent week will show a still more satisfactory result; the chest will expand, the cavity under the collar-bones disappear, the shoulders be thrown back, and with the improvement of all the morbid symptoms the body recover flesh, and the countenance regain its healthy aspect and natural fulness.



THE PULMONARY RESPIRATOR.

In many cases, the expansion is so steady, that at the end of a few months the waistcoat has often *to be enlarged*. The time that the respirator must be used depends upon circumstances; but, in general, it should not be discontinued under a twelvemonth, and then resumed on the first sign of a relapse. The only case in which its use is for a time interdicted is during spitting of blood, when the sugar of lead pills, leeches, or cupping on the chest should be substituted, till that symptom having been relieved allows the patient to return to the only certain remedy we possess, the respirator.

Some of the benefits that result from this treatment are that the patient is saved much of the torture inflicted by blisters and tartar emetic, which, with many of the drugs now so popular in the disease, may be expunged without injury to the patient. Mercury, as tending to the liquefaction of tubercular matter, is decidedly most objectionable. For the sounds yielded by percussion, &c., see STETHOSCOPE. For an internal treatment to accompany the constant use of the respirator, the reader is referred to the prescriptions given under the first, or palliative treatment of consumption.

CONTAGION.—Medically, this word signifies the spreading or catching of a disease, or the communicating or transferring of a malady from one person to another by *contact* or *touch*, as exemplified in the cases of itch and cow-pox—the first by touch, the last by vaccination. Several other diseases are in the same way contagious, but the above are sufficient for illustration. Great diversity of opinion exists among medical men as to the strict distinction between *contagion* and *infection;* many using the one word to imply both those diseases propagated by touch or contagion, and those more subtly conveyed from one body to another by the mysterious agency of miasmata. That invisible gas loaded with the seeds of pestilence, which, floating on the air, is carried to an unknown distance to germinate in a new soil, and again spread its corruptible elements: an unexplained, but sufficiently well-authenticated cause of disease known as infection, and of which typhus fever and small pox are the best examples.

The nature of malaria, and the peculiar condition of the atmosphere favourable to the carriage of this invisible gossamer poison, will be explained under the heads of Malaria and Infection, which see.

CONTRACTIBILITY. — A drawing together; an inherent power of contraction: a professional term used to express the power residing in all muscular fibre, when extended or pulled out, to return to its original condition without injury.

It is this power that gives all the force to the muscles of the body, as before a blow can be struck, a step advanced, or a motion made, the muscle or set of muscles that perform the act must first be drawn by the nerves of volition and motion into a more or less rigid state of *contraction*. A small piece of India-rubber drawn out into a lengthened string, illustrates, when the stretch at one end is removed, the power and nature of muscular contractibility.

CONTRAYERVA DORSTENIA.—A mucilaginous plant, formerly much employed as a tonic diaphoretic and astringent. From the absence of tannin the infusion of contrayerva bark makes an admirable vehicle for the exhibition of iron in all its shapes. A strong decoction of the plant mixed with chalk, and dried into round masses like prepared chalk, is usually vended by chemists as Contrayerva Balls, for children during teething or diarrhœa.

CONTUSIONS.—This class of external injuries so nearly resembles that of bruises that the same description may generally answer for both. Each is an injury inflicted by a blunt instrument, and may be effected by blows, falls, or collisions, and is attended with discolorations and swelling. Contusions are generally more severe than bruises, and are divided into those called simple and compound. The simple contusion differs little from a bruise, and presents a discoloured and partly swollen surface, large or small according to the severity of the blow or fall. A black eye is as often a contusion as a bruise. Contusions require, in most instances, the same treatment as the former, and should consist in applying a pledget of lint well soaked in extract of lead, which generally will be found sufficient, in one or two applications, to cure the accident.

A compound contusion is a much more serious injury, for, in addition to the cutting or abrasion of the skin, the cellular tissue and muscles beneath are often so seriously disorganized as to be reduced to a state of pulp. Such accidents are always more serious over bones thinly covered with flesh, as then the parts injured are liable to mortify and slough.

The TREATMENT in such cases consists *in first laying* the torn or cut skin as *smooth and natural* as possible, removing any sand or stones, applying, as in the former case, a pledget wetted with the extract of lead, and laying a warm bran poultice over all. This application is to be repeated every four or six hours, and as much rest given to the part as possible. See BRUISE.

CONVALESCENCE.—By this term is understood the period between the cure of a disease and the perfect recovery of the patient. The stage of convalescence requires much and careful watching, that the two indications to be fulfilled may be properly understood and vigilantly provided for; namely, to restore the strength, and guard against a relapse. The space of time occupied in a recovery is extremely uncertain, the period of convalescence after some diseases being very tedious; it is also always a critical time, in which the convalescent may suffer one or even several relapses.

CONVOLVULUS.—A genus of plants with trumpet-shaped flowers belonging to the Natural order *Convolvulaceæ;* the most important drugs derived from the genus are Jalap and Scammony, which see.

CONVULSIONS are irregular and involuntary contractions of the muscular fibres of the whole or a part of the body, caused by some source of irritation applied to the nervous system.

From whatever cause induced, upon the removal of the nervous influence which maintains the tone of the muscles, the equilibrium being withdrawn, the *flexors* are thrown into violent contraction, and the *extensors*, being put on the stretch, are in their turn brought into action; and an alternate contraction of the two sets of muscles takes place; but the flexors, being the most excited, finally overpower the extensors, and when death ensues, the flexor muscles of the hands, feet, and legs are found *flexed*. Convulsions are often the last movements of a living body; and not unfrequently prove an efficient cause of restoration from syncope, or fainting; for when the circulation has almost ceased and the heart, rendered too languid by the small amount of blood it receives, to act with sufficient vigour to maintain life, the contraction of the muscles of the extremities forces the blood through the veins up to the heart, and by that accession restores the organ to its natural function. The trembling felt in the limbs from cold is a low form of convulsion, and serves in a measure to increase the warmth by, in the same manner, restoring the circulation

A perfect convulsion consists of an alternate contraction and relaxation of the muscles, and is called *clonic convulsion*, a condition that may be exemplified by the shutting and opening of the hand. This form of the disease is shown most completely in hysteria.

Another form of convulsion is that in which the contraction, instead of being followed by relaxation, is succeeded by rigidity or a powerful tension of the muscles; this is called *tonic convulsion*, and is exemplified by lock-jaw and tetanus.

SYMPTOMS.—The signs that indicate the approach of convulsions are generally pains in the head, with giddiness, dimness of sight, cold feet, and tremblings; creeping chills are felt extending up the spine; the eyes become bloodshot and protrude; the muscles of the face are irregularly affected, causing the teeth to chatter, as if the patient were cold; the eyes are rolled about; the tongue is protruded; the patient gasps for breath; clutches violently with his hands, which are often so spasmodically clenched as to drive the nails into the flesh; the veins swell, and become distended like knotted cords; and the whole body is thrown into severe contractions. So powerful are these involuntary motions, that while under their influence it often requires six or eight men to restrain a weak girl, whom at another time a woman might have coerced. This state or paroxysm, in which the patient is desperately fighting with his arms, striking and plunging with his legs, and writhing his body in every conceivable position, may endure for only a few minutes, or it may continue for hours. In some cases the attack may consist of several stages, with longer or shorter intermissions, or periods of extreme languor and exhaustion; when in a moment, and without warning, the same violent convulsions and struggling is resumed, till, either returning more rapidly, and lasting longer, the patient expires under their severity; or having longer intermissions, and the attacks becoming weaker, the paroxysm finally subsides, leaving the sufferer completely prostrated.

CAUSES.—Females are, as a rule, more frequently subject to convulsions than males, and whatever upsets the balance of nervous power, or irritates the nervous system, acts as an exciting cause. Uterine diseases, menstrual irregularity, tape worms, mental excitement, the *sudden* receding from the surface of any eruptive disease, and the exhaustion consequent on a prolonged labour, or flooding, are among the most general causes with adults; the convulsions of infants or children proceed from acid or acrid matter in the stomach and bowels, water on the head, the irritation of teething, worms, &c. See ADVICE TO MOTHERS; INFANTS, DISEASES OF.

TREATMENT.—This must depend upon the cause that has in the first instance produced the disease. For the convulsions of childhood, the warm bath, friction along the spine, lancing the gums, and an aperient powder, will be found the most suitable remedies. If produced by some repelled disease, the warm bath, with cold lotions to the head, or blisters, must be resorted to; while in those cases where the convulsions arise from uterine or epileptic causes, those diseases must be referred to for the proper treatment to be adopted.

When this disease occurs in a full-bodied, youthful subject, it may be necessary to bleed, and that freely; but in most cases the best and most effectual remedy is an emetic of white vitriol, which will more frequently break the chain of morbid action than any other remedy. The after treatment will then depend upon circumstances, and the *nature* of the exciting cause; in general, ammonia, brandy, ether, and camphor are required. When convulsions proceed from vegetable poisons, the stomach-pump, and such means as are prescribed under Poisons—which see—should be adopted. In bleeding a patient while under the influence of the convulsion, great care is necessary on the part of the operator, lest in the struggles of the patient he should transfix the vein, and wound the artery beneath. For a more consecutive mode of treatment see HYSTERIA.

COPAIBA, OR COPAYVA, BALSAM OF.—The plant which yields this medical balm is a native of tropical latitudes, and is known as the *Copaifera muttynga*, belonging to the Natural order *Leguminosæ*. The balsam of capivi, as it is commonly called, is obtained in the usual manner by making incisions in the bark of the plant, and collecting in suitable vessels the resinous juice which exudes. Capivi acts on the body as a diuretic, expectorant, and in large doses as a purgative, and exercises a direct and special influence on the mucous membranes of the *body*. On account of this action on the lining membrane of the alimentary canal, the drug has been given in those diseases which more properly have their seat in some part of that membrane. Foremost among these are those affecting the urinary organs, as in chronic diseases of the kidneys and the urethra, in fluor albus, gleet, and gonorrhœa. In affections of the lining membrane of the windpipe and air-passages, as in cases of chronic bronchitis, capivi has also been strongly recommended. It may either be taken alone or in combination with the yolk of an egg or mucilage, in the form of an emulsion, or simply floating on a little peppermint or cinnamon water.

For those whose stomach cannot retain the capivi, or wish to avoid the smell left in the mouth, an ingenious method has been lately adopted of enclosing the balsam in a thin gelatinous capsule, which being swallowed like a bolus or large pill, is ultimately dissolved. The rank smell attending this drug is the most objectionable property it possesses, for being so strong and peculiar, it is apt to betray its use in the breath of the patient. The dose of capivi is from 10 or 15 drops to a drachm, or small teaspoonful, taken from every four hours to three times a day.

COPAL.—A resinous drug possessing diuretic properties, but seldom employed in medicine, its chief use being to varnish —when dissolved in turpentine, naphtha, or spirits of wine—paper, wood, or metals.

COPPER.—*Cuprum.* A well-known metal, of a yellow-reddish colour, which, on account of its extreme ductility and malleability, is of great value in the arts in regard to the many purposes to which it can be applied; it is eight and a half times heavier than water, and possesses the great advantage of not being easily acted on by the atmosphere like other metals, while its power of resisting the action of salt water, renders it invaluable as a sheeting for the bottoms of ships. Copper is the most sonorous of all the metals, and is found, both native and in combination with sulphur, in all parts of the world, though the finest qualities are found in Great Britain, Sweden, Turkey, Australia, &c.

Preparations and Uses.—There are three kinds of the native copper, known as the common, the rose, and the virgin. There are only two preparations, or salts of copper, used in medicine; the one a combination of sulphuric acid and copper—*the sulphate of copper;* and the other
composed of vinegar and the oxide o
metal—the acetate of copper. The
phate—bluestone, or blue vitriol—is
quently found in a liquid state in
pools in the mine, from which it i
tained in rich blue crystals by eva
tion; or it is found in solid masses,
it is purified by dissolving, filtering
evaporating into crystals. The ace
or verdigris, is procured by was
plates of copper with vinegar or the
of wine, and setting the plates to
when the product is formed on the su
of the metal, in the form of a green
or paste, from which it is scraped
dried, and the plates again submitte
the action of the air and acid.

NATIVE COPPER ORE.

Copper exercises three distinct ac
on the system, namely, as an emeti
astringent, and as an escharotic or a
tic; it possesses also a fourth a
common to all metals taken in
doses—that of a tonic. As an emet
doses of from 7 to 15 grains, sulpha
copper is extremely useful in many
where such an action is necessary, es
ally in cases of vegetable poisoning.
as astringent in a collyrium for weak
in the proportion of 1 grain to the
of water; or as an astringent lotion
conditioned or sluggish ulcers, in the
portion of 3 grains to the ounce.
as an escharotic, the sulphate, or
stone, is employed in the form of a
rated solution, or the part is rubbed

the wet crystal, as in using caustic, or by covering the surface with a layer of powdered sulphate of copper. The article, however, most generally used for this purpose is the acetate, or verdigris, which, made into an ointment, was at one time much used as an application to cancerous ulcers. As a tonic, the action of the sulphate of copper, in doses of from ¼ to ½ a grain three times a day, especially for the debility consequent on nervous diseases, such as epilepsy, St. Vitus's dance, &c., when made into pills, is both satisfactory and permanent. Other preparations are occasionally used, as the nitrate, carbonate, and ammoniate of copper; their properties, however, are the same as those already given. Its effects on the system when taken in excess, or an over-dose, will be found under the head of Poisons, which see.

COPPERAS.—The name commonly iven to certain impure mineral salts sually found in a liquid or a crystallized ate in mines, and in certain soils or rths. These impure salts of metals are ually called *vitriols*, from the fact of eir containing some preparation of sulphur, such as sulphuric acid, or vitriol, ch being designated by its colour, blue, ite, green,—as blue copperas, blue-stone or vitriol (*sulphas cupri*); white peras, or white vitriol (*sulphas zinci*); d green copperas, greenstone, or green triol (*sulphas ferri*). Thus the three lphates of copper, iron, and zinc are the ree mineral salts known as the copperas f each.

COR.—The Latin for the heart; the nermost cell in fruit; the core or centre f any substance. See Heart.

CORAL.—A well-known marine structure, of which there are three varieties, he red, white, and black. White coral is metimes used for the manufacture of rtificial teeth; the most serviceable purse to which it is put is that of a rasp for fants' gums when cutting their teeth. 'or this use, however, the stick of coral hould be roughed by intersecting lines, th a fine file; when so made, and of fficient length, and properly secured to he bells or waist of the child, the coral ecomes of great service during the period f dentition for the infant both to bite on, nd to rub off the hard skin from the ums, a service which the smooth coral oes not effect.

CORDIAL.—A medicinal beverage or rink to comfort or strengthen the heart, ccording to the ancient *understanding of the word*; any warm, stimulating, and grateful liquid acting as a stomachic and restorative. Cordials are generally made with essential oils dissolved in alcohol, and combined with spices and sugar, such as noyeau, cloves, peppermint, shrub, lovage, curaçoa, ratafia. The only preparation in the Pharmacopœia that can be strictly called a cordial, as being stimulating, sweet, and grateful, is the compound tincture of cardamoms, made according to the Edinburgh College. See Caudle.

CORIANDER SEEDS.—A warm, agreeable, and aromatic article, used to some extent in medicine as a stomachic and carminative, and very largely by confectioners and distillers in the manufacture of confectionary and cordials.

The coriander, *Coriandrum sativum*, belongs to the Natural order *Umbelliferæ*, and is largely cultivated in Kent and Sussex. The seeds are generally used in making infusions of senna for children, or when preparing black draught, the coriander being added to correct the griping of the senna; the powder of the seeds is also used in carminative mixtures. Like all aromatic plants, the coriander contains a large quantity of essential oil, and the seeds are sometimes smoked with aniseed and stramonium, in asthma.

CORK.—Though not used medicinally, this article is too useful to be omitted from a medical dictionary. Cork is the bark of a species of oak growing chiefly in Spain and Portugal. As no insect preys on this wood, it makes a good lining for trunks, for emigrants who have to reside in colonies where ants and other insects abound. The Egyptians, on this account, made coffins of it, first painting the inside with bitumen. From its remarkable buoyancy, cork forms the basis of all floating apparatuses in case of drowning, and no emigrant should consider his outfit complete unless a cork jacket forms part of his wardrobe. From being a non-conductor, cork is now largely used for inner soles to shoes and boots, and a more useful preventive against damp or wet feet is not to be found; and in this variable climate, is a precaution that should not be omitted, especially by females, in a country where so many diseases spring from exposure to wet feet. It should not be forgotten, that an excellent black paint can always be obtained by burning cork shavings, and rubbing down the powder with any convenient oil. The cork jacket can either be purchased ready made, or the emigrant can construct one for himself and the other members of his family. In the first instance, two pieces of coarse, *thick* canvas, the shape of a large waistcoat or spencer, with two holes for the arms, are to be cut out; four large plates of cork, of a sufficient thickness, are next to be procured, the two front ones being fashioned into the shape of the cloth front of an ordinary waistcoat, and the back pieces of the form of the two portions of the back; the two front and two back pieces are then to be stitched to one of the canvas shapes —care being taken to leave a space of at least two inches of the canvas *beyond* the front pieces, and twice that distance between the front and back pieces, to allow a free use of the arms; a small space must also be left between the two back pieces. The other canvas shape is now to be laid above the cork, and each of the four pieces carefully and strongly sewn round, so as to retain all smoothly and firmly in their places; the open edges are next to be properly bound round, and, lastly, three small straps and buckles attached to the front. The cork waistcoat or jacket should be frequently tried on, so as to acquire despatch in the fastening of it.

When on board ship, it should be always kept hanging by a nail at the head of the bed, or in some part of the cabin or berth where it can always be found. See EMIGRANT.

CORNEA.—The anterior, transparent, convex part of the globe of the eye, which, of a firm, tough, and horn-like texture, is sometimes called the horn of the eye. The cornea, like the glass of a watch, is let into a rim in the white or sclerotic coat of the eye, and is composed of a number of concentric cellular lamellæ, or scales, and is covered anteriorly, or on its concave side, by a reflection of the covering of the aqueous humour, and which, in its physiology, is of the serous order of membranes. The principal diseases to which this horn-like substance is liable, are "fleshy excrescences" growing on its surface; "abscesses" forming in its cells; "ulcers," "ossification," "alteration in the shape of the cornea," and, the most frequent of all, "opacities." But as all these are surgical diseases, and can only be distinguished and treated by a medical man, it is unnecessary to describe them here more fully; all that it is requisite to know will be explained under EYE, DISEASES OF, which see.

CORNS.—There are few diseases of the *body, however* grave may be their consequences, that produce more pain and discomfort than these insignificant indurations on the feet and toes. Why corns are never painful on the hand, and so intolerably sensitive on the foot, arises from the unnatural state of humid heat in which, from childhood to the end of life, the feet are always kept, and by which means they are rendered extremely delicate and susceptible.

Corns are mere indurations of the cuticle, formed by pressure on any part of the feet or toes. Corns are of two descriptions—the common, or hard corn, and the soft corn; the former always forms on the top, side, or bottom of the toe or foot, while the soft is almost always produced between the toes. The TREATMENT of the hard corn is extremely easy and simple, and merely requires the removal of the pressure from the part for a few days, the soaking of the foot for some time in hot water, till the nails and callosities are sufficiently softened to allow of their being freely cut with a sharp-pointed penknife, when by patience and perseverance the whole, or nearly the whole, of the callosity may be removed. This may almost always be effected, if care has been taken not to attempt the bathing and cutting till all tenderness has been removed from the foot or toe, by wearing a corn-plaster for a sufficient length of time to ensure such a result. With respect to the corn-plaster, all that is necessary is to make it large and thick enough to answer the two following points,—1st, to enable every part of the tender corn to be admitted into and protected by the circular hole in the centre; and 2nd, to effectually relieve the corn from all pressure of the boot or shoe; the first can only be effected by punching the hole of a proper size, and the second by having the plaster thick enough for the object sought. The articles sold in the shops as corn-plasters are too small and far too thin, to answer either purpose proposed. The person should obtain a piece of agaric, soft, fine cork, or a very thick piece of buckskin, have the surface spread by a chemist with adhesive plaster, and when required, cut out a square piece —from a half to two inches square—and then, with a punch and hammer, strike out a central circle, sufficient for the first object sought—that of properly taking in all the callosity. The heat of the foot will generally cause the adhesive side of the plaster to stick, when care must be taken, in putting on the sock, that the plaster is not moved from its proper position: that thi m properly effected will be told ly when the boot is put on, by the lt from the removal of the pressure. plaster should be put on every l all tenderness has subsided, when hing and cutting are to be adopted. ave been minute in the description e necessary precautions, because, the evil to be cured is so trifling, en the source of so much real dis- ; and suffering, that the reader will nkful for any sure and practical f relieving so serious an annoyance; e recommendations given, if pro- arried out, are certain to realize efit promised.

corns are to be treated precisely on e principles,—removal of the pres- l the absence of the tenderness; ; the feet, and the removal of as f the corn with the point of the nd the nail of the finger as can be ted, returning, after a few days' rest, completion of the process. The eculiarity in this case is in the f relieving the pressure; for though ht boot in the first instance was the it is the pressure of the next toe generally keeps up the evil, the soft ing either situated on the side of , or at the bottom, between the two hen on the side, a piece of buck- ster, of a proper size, is to be per- in the usual manner, and so placed mit the entrance of the corn and the opposite toe touching; but ituated at the base, a small bar of ker plaster, made adhesive on *both* to be placed between the two toes, ing taken not to let it touch the nd repeating it every day, till the d irritation is subdued.

y persons recommend the applica- strong acetic acid, lunar caustic, ne, or caustic potass, with the destroying the indurated cuticle; it is almost impossible to apply ithout their spreading to the sur- g skin, and often causing great al pain, they should not be em- especially when a more effectual, nd expeditious course is offered : the only preparation that should applied to a corn is the extract of d that only is useful when em- for soft corns.

NU CERVI.—Horn of stag, n; the professional name for mmonia, or the spirits of harts- See AMMONIA.

ONA.—The *crown.* *The only terms* in medical science receiving this name are two in the branch of anatomy—the *coronal suture*, "the crown seam," applied to the serrated junction of the frontal bone of the skull with the two parietal or side bones of the vault; and some blood-vessels of the heart having a fanciful resemblance to a crown, and called the *coronary* arteries.

CORONOID PROCESS.—A projection on the small bone of the arm (the ulna), and so called from a supposed resemblance to the bill of a crow (*corone*).

CORPUS.—A body. The word is used very freely in the plural in the science of anatomy to express small elevations in the brain, and structures of a different character to the organ in which they are found, occurring in other parts.

CORPUSCULUM.—The smallest part or physical atom of a body; a very small body; a term applied in anatomy to some minute, hard elevations on the valve of the aorta.

CORROBORANTS.—Medicines which are supposed to make strong the body; in other words, tonics and stimulants, as bark, wine, beef, and porter.

CORROSIVE SUBLIMATE.—The dry muriate of quicksilver, or bichloride of mercury, composed of one proportion of quicksilver with two of chlorine. Though one of the most violently corrosive and irritating of all our mineral poisons, corrosive sublimate, properly used, and administered in the form of an alcoholic solution, becomes one of the most valuable of all our mercurial preparations.

The most practical and efficacious mode of administering corrosive sublimate is in the following formula and dose. Take of—

Bichloride of mercury .	10 grains.
Spirits of wine . . .	1 ounce.

Dissolve. Take 5 drops of the solution in a little water twice a day for three days, after which 7 drops are to be taken in the same manner three times a day for the same period, and finally, 10 drops three times a day for the three days more, till the dose reaches 10 drops five times a day, when another rest is to be observed, the drops being each time renewed in the smallest quantity, gradually increased, and so on, alternately discontinuing and resuming the amount or frequency of the dose. The decoction of dandelion, with sassafras and ground ivy, and the simple or compound decoction of sarsaparilla, are the two best alterative and tonic medicines that can be taken with the corrosive mixture, either of these articles being used instead of water, if the patient chooses, as a vehicle in which to take the mercurial drops. The best antidotes to corrosive sublimate are — raw eggs, white of egg, flour and magnesia, and any albuminous articles. See POISONS.

CORRUGATOR SUPERCILII. — The name of a pair of thin superficial muscles, situated below the skin of the forehead, the action of which is to corrugate or wrinkle the forehead: the principal muscles used in frowning.

CORSET.—This is one of the most useful and necessary articles of female dress, and though many of the worst diseases of the chest have been developed and are frequently greatly aggravated by tight lacing, the indiscriminate warfare carried on by medical men and public writers against the use in any form of a garb that confines the motions of the thorax is marked by as much cant as ignorance. No medical man whose experience has lain largely among women, and who has studied the requirements of the female system at different periods of life, would risk his reputation by such an unmeasured condemnation. That stays are as necessary to a woman, after a certain stage of life, as a bandage is for a sprain, no man who is qualified to speak on the subject will deny. Stays, or rather corsets, however, are quite uncalled-for *with growing girls*, unless, indeed, there should be some natural deformity or weakness to correct. The idea that such a rigid encasement is requisite to give *contour* to the bust, and impart a graceful carriage to the figure, is equally erroneous. Up to 17 or 18, or perhaps till her marriage, no young female, if she takes due care of her person, and does not acquire bad habits, has any occasion to wear a corset for the mere sake of support and strength. Whatever is worn up to that time round the chest requires neither whalebone nor steel, nor any tension more rigid than that afforded by strings or straps. But to the mother who has domestic duties to perform, and children to nurse and suckle, the corset becomes an *absolute necessity;* and that it may effectually serve the purpose for which it is demanded —support and comfort—it *must* be laced with sufficient tightness to insure those objects. That tight lacing is injurious, *especially with young girls*, and more particularly with those of naturally narrow chests, and in whose families there are seeds of consumption, no one will deny; but the tight lacing which a married woman employs is never of a nature likely either to develop or aggravate pulmonary disease.

It is against the universal employment of steel-ribbed stays and tightly drawn corsets in young women under 20 years, that both authority and reason should be directed to urge the discontinuance of a system decidedly hurtful, and, as we shall have reason hereafter to show, perfectly useless for the object aimed at.

CORTEX.—Bark; the Latin for the bark or rind of any tree or fruit, as the *cortex querci* (bark of the oak), *cortex aurantii* (rind of the orange). Barks of trees are almost all astringent and tonic in their effect on the system, the former property residing in the *tannin* contained in most barks—that principle which converts the hide of an animal, when subjected to it, into leather. The bark which contains the largest amount of this principle is that of the oak; hence its employment in the tan-yard. Quassia, cascarilla, and some others, are barks destitute of *tannin*.

COSMETICS.—A class of medicaments applied externally to the body for the purpose of preserving the bloom and beauty of youth, or restoring those attractions when lost or in the progress of decay. This branch of empirical practice has on the Continent been reduced almost to a science, and in this country we have at present female professors of the art, whose practice embraces patients in the highest rank of social life. Though, in its extended form, the principles of the art embrace the regeneration of the whole system by baths and manipulations to the body, it is chiefly to the head, face, bust, hands, and arms that the mystery of cosmetic practice is usually directed. From the time of Medea, when she restored the bent and wrinkled form of Jason's father to the lithe figure and lusty beauty of his early manhood, all nations have more or less dabbled in the art of revivifying age and retaining the freshness of youth: but that they have never succeeded is proved by the ill success that still marks the practice; for as the chief articles used for the purpose are derived from the mineral kingdom, the baneful consequences that follow their use become as punishments on the ignorance or vanity of those who adopt them.

Among the articles most used are lead, mercury, bismuth, antimony, and arsenic. Pearl powder, that compound which actresses and ladies of fashion use so extensively to give a blooming complexion to the neck and face, is prepared with bismuth powder, or white oxide, and French chalk, with a small amount of carmine to counteract its deadly whiteness; it is usually put on as a liquid compost, and the lady has to sit for some time before her complexion is dry enough to permit the after touches of rouge, and other pigments to intensify the eyelashes and brows. From what we have already said concerning the absorbing and exhaling properties of the skin, the extreme danger of thus blocking up the pores of the most sensitive part of the body's surface will be evident to all. For not only is all *sensible* and *insensible* perspiration prevented, but when the body becomes heated, the absorbents take up the mineral from the cuticle and carry it to the system, where it is certain, sooner or later, to show its influence on the nervous organization by a partial paralysis of the eyelids or the corner of the mouth. Nor is this the only danger. The skin is made coarse and wrinkled by fine lines, soon loses all its natural smoothness, and the lady is at length compelled to paint by day as well as by night, to enable her to meet the public gaze.

A little of this injurious effect may be prevented by first covering the face and breast with lard or cold cream, when, after having filled up all the pores by this means, and wiped the skin, the wash of pearl powder may be painted in. There are certain strong odours and gases which the painted lady must carefully avoid coming in contact with, or she may discover her pearly bloom in a few seconds converted into a leaden mask or a negro's darkness. Sulphuretted hydrogen or sulphur in any form, or the eating or the smell of onions, are two of the causes which produce this effect. Nearly all the washes used so frequently, under the name of kalydors, Circassian cream, milk of roses, and which are, though injurious, the least hurtful of cosmetics, are generally prepared by beating down bitter almonds with rose or elder-flower water, and adding from 1 to 2 grains of corrosive sublimate to each ounce of liquid,—sweet almonds, Castile soap, and spermaceti being mere *addenda*;—almond oil, caustic potass, essential oil of almonds as a perfume, and water, being *by some used* to make a cosmetic cream. Elder-flower water is among the most serviceable of all the washes for the face, and when used to remove freckles, with 1 grain of corrosive sublimate added to each 4 ounces, a lotion of considerable utility is produced, which may be employed two or three times a day with good results. Those ladies, however, who wish to preserve their good looks the longest, will trust rather to a happy, cheerful mind, a little constitutional aperient, the use of the bath, and simple elder-flower water as a lotion for the face, than resort to the deadly properties of mineral cosmetics, as those already enumerated as being used for the purpose.

COSTA.—A rib.

COSTÆ.—The ribs of the body, forming the sides and part of the back and front protection of the thorax, being united posteriorly to the spine, and anteriorly to the breast-bone. There are twelve ribs on each side, in both male and female, divided into the true and false: the true are the first seven from above downwards, each being inserted into the breast-bone, or *sternum*, in front; the false are the five last, connected together and to the sternum by cartilage. See RIBS.

COSTIVENESS.—A confined state of the bowels. Costiveness is either accidental or natural. The best remedies for this affection of the bowels are exercise, a large amount of solid, bulky food, coarse bread, or bread made of unbolted flour, and mild aperient medicines.

COTTON.—The downy substance obtained from the seed of the cotton plant, and which, after undergoing many manipulations, is finally woven into the fabric denominated calicoes, used for surgical bandages; it is, however, in its fine, loose, carded state, and when, adhered to paper, it is prepared in sheets and called *wadding*, that cotton becomes so valuable an agent to the surgeon as a dressing to scalds and burns, for applications for the ear in deafness, and for the teeth when wetted with laudanum, creosote, tincture of myrrh, &c., in toothache. See BURNS, SCALDS, WADDING, DEAFNESS, &c.

COTYLEDON UMBILICUS. — The botanical name of the plant called Navelwort, which see.

COUCHING. — The operation for cataract is called by this name; couching consists in depressing the cataract out of the axis of sight, or else the displacement to the right or left, breaking up and disturbance of the opaque lens—the cataract—in any way so as to remove it from the line of vision. This delicate operation is performed by a peculiar kind of crochet-looking needle. The obscurity, when so removed and dismembered, being in time absorbed by the lymphatics of the eye.

COUGH.—A spasmodic effort of nature, by a convulsive action of the lungs, to relieve that organ of some load or oppression hurtful to the due performance of its function, whether from the exudation of some tenacious mucus or phlegm, or from blood or pus effused on its surface or into its cells. Cough is always a symptom of some disease or affection: the most frequent are influenza; catarrh, or cold; bronchitis, acute and chronic; hooping cough; phthisis. With elderly persons cough sometimes becomes permanent throughout the winter months of every year. In general, cough must be treated according to the nature of the disease that has called it forth, and also according to the character of the expectoration, as to whether it is thick or thin.

Treatment of an Influenza Cough.—Take of—

Compound tragacanth powder	2 drachms.
Lump sugar	½ ounce.
Hot water.	6 ounces.

Rub smoothly down in a mortar, adding the water by degrees.

Tincture of tolu . . .	1 drachm.
Spirits of nitre . . .	3 drachms.
Paregoric	4 drachms.
Spirits of mindererus .	1 ounce.

Mix: two tablespoonfuls to be taken every four or six hours.

Catarrhal Cough.—Take of—

Syrup of squills, syrup of tolu, of each . . .	1 ounce.
Antimonial wine . .	½ ounce.
Spirits of mindererus .	1 ounce.
Mucilage of gum arabic	1 ounce.
Paregoric, and spirits of nitre, of each . .	½ ounce.
Mint water	2½ ounces.

Mix: one tablespoonful to be given every three hours, and two at bedtime.

Bronchial Cough.—Take of—

Nitrate of potass . . .	½ drachm.
Tartar emetic . . .	3 grains.
Camphor water . . .	6 ounces.
Laudanum	1 drachm.

Mix: take two tablespoonfuls every three hours.

Asthmatical and Chronic Bronchia Cough.—Take of—

Gum ammoniacum . .	1 drachm.
Nitrate of potass . .	½ drachm.
Camphor water . . .	6½ ounces.

Rub till thoroughly incorporated; the add—

Mucilage	1 ounce.
Tincture of benzoin (compound)	2 drachms.

Mix: a tablespoonful every three hours.

Take of—

Peppermint water . .	8 ounces.
Gum ammoniacum. .	1 drachm.
Ammonia (carbonate) .	1 scruple.

Mix, and make a smooth, creamy mixture; then add—

Tincture of squills, and tincture of tolu, of each	2 drachms.
Spirits of nitre . . .	4 drachms.
Spirits of sulphuric ether	2 drachms.

Mix: two tablespoonfuls to be take every three or four hours, or when r quired.

Take of—

Dover's powder . . .	½ drachm.
Carbonate of ammonia	½ drachm.
Camphor water . . .	enough t make 8 ounce
Syrup of squills . . .	6 drachms.
Spirits of nitre . . .	3 drachms.

Mix: two tablespoonfuls to be taken thre times a day.

The cough in the spasmodic disease hooping cough must be treated by othe means than mere remedies for a sympto (see HOOPING COUGH); but for the coug that sometimes lingers after the spasmodi character has been subdued, the followin is a very useful expectorant remedy.

Take of—

Syrup of squills, syrup of tolu, antimonial wine, of each . . .	½ ounce.

Mix: a teaspoonful to be given occa sionally.

For any slight ordinary Cough.—Tak of—

Compound almond confection	½ ounce.
Cinnamon water . .	6 ounces.

Mix, and form an emulsion, to whic add—

Spirits of sweet nitre .	2 drachms.
Spirits of mindererus .	1 ounce.
Syrup of tolu. . . .	6 drachms.
Antimonial wine . .	2 drachms.

Mix: two tablespoonfuls to be take occasionally.

NTENANCE. — The human
ance has been called the title-
the soul, and the mirror of the
out without going the full length
r of these figures, it is certain
y intelligent medical man of
experience can read in the
f a patient's visage a very near
ge of the nature of the illness
presses him, and even form a
guess of the organs whose
ity are causing all his sufferings.
atural pallor sometimes pervading
ures gives a clear insight to a
heart, a loss of power in the
coming faintings, or of internal
age; while the florid face and
eins, taken with the configuration
head, quite as plainly indicate
ing apoplexy or congestion: in
ious- countenance and wistful
ain, he reads the progress of
disease in either the heart, its
or the lungs: a quick, restless
isitive face, with abrupt motions,
fever of some serious type, with
ebral excitement; while a square,
visage prognosticates those
diseases that too frequently end
sis and mania. See FACE.

TER EXTENSION.—A term
urgery in the reduction of a frac-
en the operator extends or pulls
in one direction, while the assist-
ping the other portion above or
e fracture, extends his part in a
direction, till the fractured por-
he bone are placed in their proper
. See FRACTURE.

TER IRRITATION.—A system
ies designed to relieve some in-
mplaint by the pain, irritation,
they excite in the parts, textures,
ranes lying above the seat of the
The most popular example of
irritation is holding a burnt or
member to the fire; the theory
at like cures like, and that the
ills the lesser injury.

er-irritants embrace both the
d the potential cauteries—heat,
dry or moist, blisters, and stimu-
ll kinds.

P-DE-SOLEIL.—Sunstroke.
den and dangerous disease is very
is country, or any part of Europe,
opical latitudes is very common,
y among those who do not take
care to keep the head well de-
om the vertical rays of the sun:
k is generally *so sudden, that the* person has only time to be conscious of an instantaneous and excruciating pain in the head, before he sinks insensible to the earth, or on the deck of the ship—struck down as if by an instant apoplexy.

The TREATMENT in such cases is to be guided in a great measure by the age of the patient; bleeding, however, either from the arm or temples, must be immediately adopted, cold lotions applied to the head, and the nape of the neck cupped; the patient, moreover, is to be kept perfectly still, and in a darkened chamber, and the antiphlogistic regimen strictly adopted, and by the exhibition of the following mixture, after a dose of calomel and croton oil; take of—

Epsom salts	1 ounce.
Tartar emetic . . .	2 grains.
Water	10 ounces.

Mix: three tablespoonfuls to be given every four or six hours.

COURT PLASTER.—This aromatic and elegant preparation is made by stretching a piece of black sarcenet tightly over a board, then laying on with a brush a coat of thick isinglass, dissolved in boiling water, and when properly dry, laying on a coat of varnish, prepared by dissolving gum benzoin and China turpentine in spirits of wine; and when thoroughly dry, cutting it into lengths of a yard long, or squares for books and ornamented wrappers.

COW POX.—The slight febrile symptoms that attend this artificial disease are hardly of sufficient importance to merit a notice here. All connected with this subject will be found under Inoculation and Vaccination, which see.

COW TREE.—The *Palo de vaca;* the Spanish name for the tree by which this remarkable example of vegetation is distinguished. The cow tree is a native of South and Central America, and is usually found growing on the barren side of a rocky hill, or from the arid sand of the parched plain at the base of the mountains. The tree itself participates, in its outward semblance, with the sterile nature of the soil in which it grows, and lifts its dried bole and withered arms like a dead and sapless trunk over the surrounding landscape, as if only waiting the first breath of the coming storm to be stretched prostrate on the sand. Yet at sunrise, when the native Indian pierces its dry bark, a stream of the richest balsamic juice issues in gallons from its shrivelled rind. The fluid that daily exudes from the incisions made in its trunk possesses an agreeable aromatic smell, and in its nourishing qualities and general characters closely resembles animal milk. Not one of the least remarkable facts connected with this tree is the circumstance that though belonging to a poisonous order of plants, it yields not only a harmless, but a nutritious substance. The cow tree, called also the *Arbol de leche*, and botanically known as *Galactodendron utile*, is found in greatest perfection in the Caraccas, and on the shores of the Lake of Maracaibo. See Milk.

COW-ITCH, or COWHAGE.—The *Dolichos pruriens*, as this plant is botanically called, belongs to the Natural order *Leguminosæ*, and is a native of tropical regions. The only part of the plant that has any medicinal use is the stiff hair that covers the external surface of the small pod that constitutes the fruit of the plant. The intolerable and persistent itching which these hairs produce, when only the smallest atom touches the cuticle, has obtained for it the name of Cow-itch, and has been long a favourite but cruel agent in practical joking. The only medical use to which this article is applied is to kill worms, especially the large, long, round species known as the *lumbrici;* and this it effects by mechanical means—the sharp hairs of the dolichos piercing the worm's tender body, like myriads of fine needles. The manner in which it is prepared for use is to take a spoonful of treacle, honey, or jam, and grasping one of the pods of the cowhage with a pair of forceps, scrape off about 10 grains of the hair with a knife, mix them with the honey or treacle, and give the whole to the child every night at bedtime, for a few occasions; giving a powder of jalap, scammony, and calomel about the fourth or fifth morning, to expel the dead worms, and the slime or *nidus* in which they engender. Should the dolichos ever get on the skin, the only means of obtaining relief is instantly to wash the part with warm water and soap, and afterwards rub lard or pomatum into and over the irritated cuticle. See Worms.

COXA.—The Hip, which see.

COYZA.—A cold in the head, with running of the eyes and nose. See Cold in the Head.

CRAB'S CLAWS, CRAB'S EYES.—Different names for the common prepared chalk. See Lime.

CRAMPS are irregular spasmodic contractions of the muscles of the whole or different parts of the body, causing most *severe pain by the* knotty and hardened state into which their fibres are contracted. Though cramp may involve the greater number of the muscles at once, the parts most generally affected are those of the feet, legs, thighs, abdomen, and arms.

The Cause sometimes proceeds from the sudden application of cold to the heated body, damp sheets, wet feet, or wet clothes; the irritation produced on the nervous system by the absorption of lead, arsenic, or other mineral poisons, and the exhaustion on long-continued evacuations, as in cholera; from the specific action of some animal *virus*, as in the bite of venomous reptiles, and in bathing, from coming in contact with cold springs, and a too lengthened stay in the water.

Treatment.—Friction will always be found the most valuable means for subduing cramps, whether general or local; and if nothing else can be obtained, the hand alone, or a piece of flannel, if properly used, may be always made of service. When a hot bath can be obtained, it should always be employed immediately, and friction used while in the water. For the more local kinds of cramp, an embrocation of camphorated oil, turpentine, and spirits of hartshorn is to be employed, rubbed in with the hand in the direction of the muscular fibres. For the cramps that arise from constitutional causes, the remedies ordered under the head of those diseases must be consulted; while for ordinary local cramps, the embrocation prescribed above, with friction, and bottles of hot water to the feet, will be found to be generally sufficient. The only internal remedy demanded is an occasional draught, composed of 1 ounce of brandy, ½ a drachm of sal-volatile, 25 drops of laudanum, 15 drops of ether, and 2 ounces of water. See Convulsions, Spasms.

CRANBERRIES.—These are a cooling, refreshing, and very agreeable acid fruit, growing extensively in the northern parts of Europe, and as an article of dietary capable of being made into very tempting and wholesome pies and tarts. In consequence of their antiscorbutic and refrigerant properties, a large jar of cranberries should form a part of the emigrant's sea stock, as they will afford a luxury on many occasions, either as a pie or pudding, when a change from salt food to such a dish will be most acceptable (see Emigrant); or, mixed with water, strained, and, if necessary, sweetened, they will make a delightful cooling drink for fever patients or persons suffering from thirst in hot climates. See Drinks.

CRANIOLOGY.—See Phrenology.

CRANIUM.—The skull; the professional name for the eight bones which, united, complete the spheroid cavity of the head, or caput. See Skull.

CRASSAMENTUM.—The clot of the blood; the thick, red mass that separates from the blood within a few minutes after being withdrawn from the body, while the whey, or watery part, called the serum, flows around it. See Blood.

CREAM.—The rich and oleaginous portion of all milk, which rises to the surface after the milk has been exposed for a few hours in a dish favourable to the process. Cream, though containing the richest portion of the milk, is hardly suited to weak or delicate stomachs, on account of the oleaginous elements it contains. See Milk.

CREAM OF TARTAR.—The supertartrate of potass or bitartrate of potass. Tartar is obtained from red wine casks, where it is deposited in the form of a brown, crystallised cake; it is then dissolved in boiling water, filtered, and evaporated into crystals, which being powdered, yield the cooling substance commonly known as the cream of tartar. See Potass.

CREMASTOR.—The name of a muscle that draws up and corrugates the skin of the scrotum. The cremastor is an involuntary muscle, and consists merely of a few fibres, thinly spread over the inner surface of the cuticle,

CREOSOTE.—A yellowish viscid fluid of an extremely strong, pungent odour, somewhat resembling tar, of a hot, rank, and caustic taste, and considerably heavier than water. Creosote is obtained from wood-tar, and after having been employed experimentally in the cure of many diseases, has at last become stationary, as a doubtful remedy in two of the most opposite character—diseases of the skin, and toothache. Creosote has sometimes been found extremely useful in allaying the sickness peculiar to pregnancy, and also the prostrating retching of sea-sickness; it has at the same time been often given with great benefit in asthma, and other affections of the respiratory organs, and as a tonic has been of service in indigestion; but unfortunately these results are so few and far between, that they cannot be taken as certain effects to be anticipated. As a stimulant to ill-conditioned ulcers, and in certain eruptive diseases of the skin, creosote, made into an ointment, is *almost always attended* with satisfactory results; while as an application to toothache, a few drops dissolved in alcohol, and applied on cotton to the tooth, will most frequently afford direct relief; the obnoxious taste, however, is often regarded as bad as the disease. The best way to use creosote is to dissolve 30 drops with 5 of oil of juniper in 2 drachms of spirits of wine, mix the whole with 1 ounce of mucilage and the same quantity of syrup, and finally add 4 ounces of water. A tablespoonful of such a mixture may be taken three times a day as an internal remedy for scorbutic or other diseases of the skin. Creosote acts as an antiseptic, both to decayed teeth and when a few drops smeared on paper are placed in a safe; for it serves not only to drive away all insects, but has the property of keeping the meat fresh for several days longer than it could be otherwise preserved.

CREPITUS.—A grating noise made by the two edges of fractured bones when they rub together; and is one of the indications of a fracture which the surgeon listens to hear, when forming an opinion as to the nature of the injury.

CRESSES.—The common watercress, the *Zepidium sativum*, is grown in every part of Great Britain; and though nearly every brook in the three kingdoms produces it, so large is the metropolitan consumption of this wholesome salad, that large districts in Hampshire and other counties are regularly cultivated with them, for the exclusive use of the London market. Watercresses are an agreeable, pungent, and refreshing article of diet, and one of the best of all the antiscorbutic herbs, and though with weak stomachs they are apt to rise and produce flatulence, they are, as a purifier of the blood, and in all affections of the skin, unsurpassed for their wholesome efficacy.

CRETA.—Chalk. See Lime.

CRETINISM.—A species of insanity approaching to idiotcy, depending on an imperfectly-developed brain, and a scrofulous condition of the blood. This low mental standard is generally found to exist in those who have the guttural malformation of a *goitre*. The inhabitants of whole valleys in some of the Swiss cantons are found afflicted with this double misfortune of goitre or bronchocele, and idiotcy or cretinism. See Goitre, and Derbyshire Neck.

CRIBRIFORM PROCESS.—The name of a process in one of the bones of the skull, so called from being perforated with holes, like a sieve, for the passage of nervous filaments.

CRICOID CARTILAGE.—One of the cartilages composing the *larynx*, or organ of voice, and so called from its annular shape. See VOICE, ORGANS OF.

CRINIS. — The hair, chiefly of the head. See HAIR.

CRISIS.—The period at which a disease was supposed to have attained its height, and from which it was said either to decline, ending in convalescence, or the patient would sink under his disease; a period when there was a change either for the better or the worse.

CRITICAL DAYS.—Among the old physicians, and even down to the last thirty years, these were days when it was said that certain changes showed themselves in fevers and other diseases, by which events might be foretold from those critical changes. It was the custom to maintain that *favourable* cases of fever always manifested a disposition to terminate on certain days, called critical; these were the 3, 5, 7, 9, 11, 14, 17, and 20, all the intervening days being classed as *unfavourable*, or non-critical, except 4 and 6, which were regarded as only secondary critical.

CROCHET.—A large steel instrument, in shape somewhat like a *crochet* needle, and used in the practice of midwifery.

CROTON OIL.—The *Croton tiglii* is a plant native of the East Indies, and belonging to the Natural order *Euphorbiaceæ*. Croton oil is one of the most powerful purgatives in the Pharmacopœia, and is obtained by pressure from the berry of the plant.

USES AND PROPERTIES. — Croton oil acts violently on the mucous membrane of the alimentary canal as a powerful cathartic, and by a sympathetic action on the bladder also; when applied to the skin it both irritates and inflames, and if retained long enough will blister the cuticle. From the speed with which it acts, croton oil is a very valuable remedy in all cases of emergency, as apoplexy, lock-jaw, madness, and where it is necessary to produce an instant action; for a drop or two, or the wet cork wiped on the tongue or the inner lip, will in a short time operate freely. The dose is from 1 to 2 drops: when rubbed on the chest, in inflammation of the lungs, it produces a pustular eruption, like tartar emetic. Croton oil given in excess acts as an irritant poison, and, like mazerean, produces an acrid burning taste in the throat, *on which account* it is advisable to give it in the form of a pill, by which means much of that annoyance is avoided. Its antidotes are emollient drinks, opium, ammonia, and the hot bath. See POISONS.

CROUP.—This disease—an inflammation of the lining membrane of the trachea, or windpipe,—both from the importance of its situation, and the rapidity with which it runs its course, is one of the most dreaded and fatal affections in the range of juvenile diseases.

The CAUSES which lead to croup, or *cynanche trachealis*, though sometimes depending on a low, damp situation, are far more frequently induced by constitutional than local accidents, and are to be looked for rather in certain characters in the child, such as a leucophlegmatic, or white skinned, puffy, indolent habit of body, than from external influences. Children of a dull and sluggish temperament are far more liable to croup than the thin, active, and sanguineous. The period at which the disease most generally occurs is between the ages of three and ten years. Croup, at certain wet seasons, is often epidemic, and by some has been considered contagious; but in this respect it is only, like hooping cough, sympathetically so, children taking it from imitation rather than from infection.

SYMPTOMS.—These begin with restlessness, which in a few hours is followed by a wheezing in the throat and hoarseness, most heard during sleep, while a short dry cough soon after succeeds, attended with a tightness and constriction in the throat, indicated by the child frequently raising its hand to the part, as if to remove some obstruction. The difficulty of breathing becomes rapidly more distressing, and the face assumes an aspect of great anxiety; the veins in the neck become swollen and knotted, or varicose, and the voice, every time the child speaks or coughs, has a sharp metallic ring, which soon settles into a steady sound, like the crow or croupy noise made by fowls when caught and held in the hand—that character, in fact, which has given to the disease the popular name which it bears. The cough, at first dry, is after a time attended by a thick ropy expectoration, which, clinging like glue to the fauces, and extremely difficult to remove, causes the child great suffering to expel, the patient appearing half suffocated in its abortive attempts to void the adhering whitish phlegm. With these symptoms come on thirst, heat, and considerable fever; the pulse is quick and vibrating,

efforts of the child to obtain air
to arch the neck back in a
most distressing to witness; till
ty of countenance and difficulty
tion increasing, the little patient
bout the *third day*, strangulated
interruption of air to the lungs.

aroxysms of this disease usually
in the evening, and become
d about midnight, the patient
freer and better during the day.
rable termination may be ex-
hen the expectoration is free
first, the breathing little inter-
th, and the febrile symptoms
but a *fatal* result may be antici-
hen the anxiety and difficulty of
g are great, the metallic sound
ite, and there is no appearance of
ation. That parents may see the
of attending to this fatal disease
tely, and better understand the
r which the different remedies are
e purpose explaining the peculiar
ction which takes place in croup,
reason why it is so rapid in its
nd often so fatal in its termination.
is an inflammation of that deli-
nbrane which, continued from the
ines the whole inner surface of
nx and windpipe, and finally of
chial tubes, or air-passages.

h the inflammation may extend
larynx to the bronchi in general,
hief is confined to that portion of
brane lining the trachea, or wind-
he consequence of this inflamma-
induce the vessels of the mem-
throw out a thick, tough secre-
protect the structure from the
t up. This effusion, in character
hin coat of gelatine, and called
nally the *adventitious or false*
e, is spread out along the whole
rence of the tracheal tube. This
ithin a sheath, though rendering
thing much more difficult and
ve, would still not of itself prove
the function of breathing, but the
ious membrane possesses this
character, that as soon as the
assage has been lined, the mem-
oses either above or below, and,
finger of a glove dropped down
, effectually cuts off all access of
the lungs, thus accounting for
forts of the child, by straightening
at and arching the neck, to over-
impediment that, once completely
terminates its life.

to induce the reabsorption of this false membrane, loosen it from its hold of the windpipe, and cause it to be expelled, that all the efforts of the physician are bent; hence the importance of using energy and despatch in the

TREATMENT.—This should commence with a warm bath and an emetic of equal parts of ipecacuanha and antimonial wine, the dose consisting, according to the age of the child, of from a teaspoonful of each to a dessertspoonful, giving a little warm water after to promote the vomiting. One, two, or three leeches are next to be placed on the upper part of the breastbone, and the bleeding for a short time encouraged by a hot fomentation. One leech will be sufficient for a child up to two years of age; after three years, and up to six or seven, three leeches will be sufficient; care, however, must be taken to make them bite over a bone, that, should there be any trouble in stopping the bleeding, pressure may be safely used. A long, narrow piece of flannel, two or three times folded, is next to be squeezed out of hot water, and hastily wrapped round the child's throat as warm as it can be borne without pain. As often as this gets cold, another flannel similarly served should be in readiness to be put on the instant the first is taken off, and in this manner a succession of fomentations are to be continued till relief is obtained, or a blister, if necessary, is substituted.

At the same time that the fomentations are commenced, the following purgative powder is to be given, and, an hour afterwards, one of the antimonial powders ordered below, which is to be repeated every half hour for four hours without check.

Purgative Powder. Take of—

Calomel	3 grains.
Scammony powder . .	6 grains.
Jalap powder . . .	5 grains.

Mix, and give the whole directly to a child from six to eight years of age; half of it to a child two years old; and two-thirds to one of four years.

Antimonial Powders. Take of—

Lump sugar, finely powdered	26 grains.
Calomel	6 grains.
Tartar emetic . . .	2 grains.

Mix thoroughly, and divide into eight powders. One of these powders, either placed on the child's tongue, or mixed with a few drops of water in a spoon, is to be given an hour after the purgative powder, and repeated every half hour till expended. These powders will suit any age from two years to six; above that period they must be made one-half stronger. At the expiration of five hours from the first powder, should the bowels not have acted *freely*, a little senna and manna tea, in a dose of from one to two tablespoonfuls, is to be given. If a decided improvement has not by this time begun to manifest itself, and the difficulty of breathing continues, with the other symptoms, the child's feet and legs must be plunged into hot water till they assume a red and speckled appearance; they are then to be wrapped in flannel, and the heat kept up by a bottle of hot water; the fomentation to the throat is to be discontinued, and a blister placed across the neck over the organ of voice.

When the symptoms commence severely, the emetic should be repeated two or even three times before resorting to any other means, except the fomentation to the throat, and allowing nearly an hour to elapse between each vomiting for the child to recover its strength. When this treatment is necessary, the blister should be applied to the neck concurrently with the leeches and the purgative powder, and if that is not necessary, from the action of the bowels, with the antimonial powders, the other measures of plunging the feet in hot water, and keeping up the heat, being adopted in their due order. In extreme cases, the child must be again immersed for about two minutes in a hot bath, and mustard poultices applied to the legs and thighs, which, unless there is a surgeon at hand to attempt the last and only chance—opening the throat by the operation of tracheotomy—is all that can be effected for the child.

After the abatement of the worst symptoms, the powders must still be continued, though they need not be taken so frequently; the second supply may be given at intervals of an hour and a half, and finally every three hours. As soon as the calomel and antimony begin to act excessively on the bowels, half a drachm of chalk and six grains of powdered kino are to be added to the whole quantity, so as to check the action and keep the minerals in the system. When the strength of the child seems to give way, it must be supported by a few spoonfuls of negus, or brandy and water, or by an injection of beef tea. The patient should be kept as upright in the bed as possible, and after the disease has been conquered, it must be treated by a course of antispasmodics and tonics, and by a change of air. All children liable to croup should be warmly dressed, and till their tenth or twelfth year, every care taken to guard them from sudden colds or damps.

Some practitioners bleed from the neck, use the nitrate of silver freely, and have found great benefit from a rapid succession of hot applications to the throat, which, in the commencement, sometimes saves the necessity of a blister; the directions, however, which have been given are those which a large experience has warranted as the most safe and beneficial.

In no case should mustard plasters be kept on children in croup longer than ten minutes, or blisters for more than four hours.

CROUP, SPASMODIC; or *Laryngismus Stridulus*, or Crowing Croup.—This, though likewise a disease of childhood, and also a croup, is a distinct disease from the former—*that* being an inflammatory, *this* a purely *spasmodic* disease,—and consists of a crowing inspiration, attended with a purple complexion and a rigid state of the muscles, the thumbs being pressed down on the palms, and clenched in the hands, with the extremities livid and swollen; there is *no cough*, but the convulsions supervene.

The symptoms are very brief, and begin with the child being roused in the night from its sleep with a sudden start of alarm; the inspiration soon becomes difficult and laborious, the countenance rapidly turns turgid and purple, convulsions succeed, and the child soon expires from asphyxia.

TREATMENT.—This consists of putting the patient in a warm bath, with cold applications to the head, and while in the bath, bleeding either from the neck or arm. The most efficient remedy has been found to be 5 grains of tobacco infused in 6 ounces of water. The cases of spasmodic croup are fortunately very rare, though the same temperaments are liable to this as to the former variety of the disease.

CRUCIAL.—A term used by surgeons when they make or order an incision in the form of a Greek cross—one perpendicular cut, and another transversely through the centre of the first. This form is very advantageous in deep-seated abscesses, as the wound is more easily kept open, and the contents of the abscess have a better opportunity of escaping.

CRUDITIES.—Any acid or raw indigestible substance in the stomach and bowels.

CRUS.—The Leg, which see. From this word comes CRURA, or legs, a term lied by anatomists to small processes be brain, bearing a fancied resemblance egs.

RUSTACEÆ.—From *crusta*, a shell. mals with a hard, shelly covering, like lobster. The Crustaceæ belongs to third division in the animal classifica-, and to which it forms the second s. See ANIMAL.

UBEBS, OR JAVA PEPPER.—This m and stimulating drug is the fruit of Indian tree, belonging to the Natural er *Piperaceæ*, and is a warm, aromatic, l stimulating spice, a little larger than k pepper. The only preparations of it general use are the powdered berries, pepper, and an essential oil, of which ontains a large amount, and which, in venience and medicinal properties, is erior to the powder, as that, by drying d keeping, loses much of its volatile oil, d with it the greater part of its efficacy. From their action on the mucous mem- ne and urinary organs, cubebs are hly esteemed in all gleets and dis- rges from those parts. The dose is m 1 to 2 drachms three times a day. few drops of the oil made into a pill, or drachm dissolved in an ounce of ohol and mixed with an ounce of rits of juniper, and a teaspoonful taken a little mucilage or gum water, three es a day, will be found a more effectual edy for gonorrhœa than any amount ordinary cubeb powder.

CUBIT, THE.—This is a name given anatomists to the inner bone of the arm—the ulna. Among the Romans, cubit meant the whole forearm, cause it was the part on which they st when on the *cubitum*, or couch fore the table. See TRICLINIUM.

Among the Hebrews, the cubit was a easure defined as beginning at the point the elbow, and ending at the knuckle int of the middle finger, or a foot and a alf. The Scripture cubit, however, was qual to 5 feet 9 inches and 880 decimal arts.

CUBOID, or Cube-shaped.—One of the seven bones forming the *tarsus*, or ankle joint.

CUCUMBER.—This well-known fruit, the cucumis, belonging to the Natural order *Cucurbitaceæ*, is too well known to need description. Cucumbers, though possessing cooling, purgative, and diuretic properties, and to persons of strong appetites and rapid digestion affording a wholesome and agreeable article of food, are to those of delicate constitutions and feeble digestion positively hurtful, proving, in numerous instances, the direct cause of diarrhœa, and often of cholera.

They are extremely liable to remain with a sense of cold oppression in the stomach, causing flatulence, pain, and distention: in no case should they be eaten without pepper; the additions of vinegar and oil are matters of individual taste.

Pickled cucumbers, or those preserved in brine, of which the Germans are so fond, may form part of a sea stock for the emigrant, as, when long confined to one routine of dietary, any change in the form of acid vegetable becomes a wholesome addition to the meal.

The wild cucumber, which possesses such drastic and poisonous properties, is only used for the purpose of extracting the active principle known as Elaterium, which see.

CUCURBIT.—A glass vessel, made somewhat like a cucumber, used by chemists in distillation.

CUMIN SEED.—The seeds of an umbelliferous plant, formerly used in medicine on account of their warm, aromatic, and stomachic properties, but now almost exploded. The seeds, like anise and others, are sometimes smoked by asthmatical patients, and a carminative—a cordial water—is distilled from them. With these exceptions, they may be regarded as extinct.

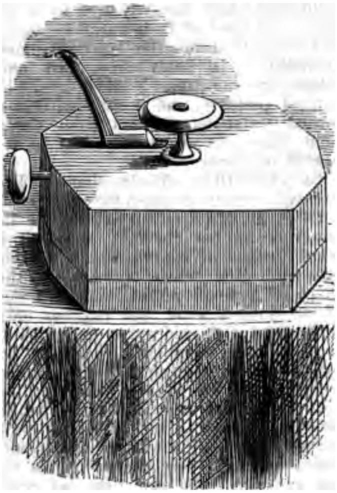
CUNEIFORM.—Wedge-shaped. The name of one of the bones of the ankle joint.

CUP, BITTER.—This article, to be found in all our chemists' shops, is a novel method of extemporizing a tonic infusion. The article is made in the shape of a small goblet, fashioned out of the quassia wood, and requires only to be filled with cold water, and allowed to stand for a short time, to impart an intensely bitter taste to the liquid within it. So strongly is the wood impregnated with this bitter principle, that, though used daily, the cup will afford its tonic draught for months without abatement. Such cups form very useful articles for the emigrant, who can thus, wherever situated, command an excellent stomachic and tonic. See EMIGRANT.

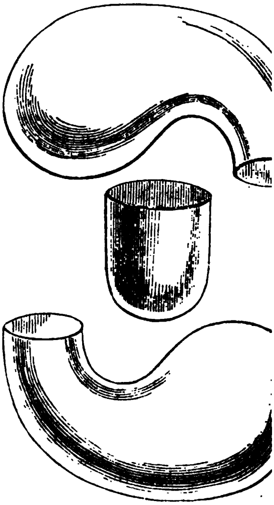
CUPPING.—This is one of the neatest operations in surgery, and, as it really inflicts hardly any pain, may be practised by the most timid, and generally as well by a female operator as by a man.

Next to bleeding, there is no operation that a colonist or emigrant should know more thoroughly how to perform, or may be called upon at any moment to practise on his family, servant, or friend, as in such cases as those of bites from venomous reptiles, sunstrokes, violent pains in the head, loins, or in many places, or from many causes,—no operation, in fact, where topical bleeding or irritation is of greater consequence than that obtained by dry or wet cupping. We shall, after having described the mode by which cupping is performed, with all its proper implements, and the reader has obtained a clear insight into the process, show him how, *without* one of the proper articles, he can manage to realize all the results and benefits of both forms of cupping.

Cupping is a surgical operation by which blood is extracted from the skin on any part of the body by means of an exhausted receiver.



SCARIFICATOR, OR CUPPING LANCETS.



CUPPING GLASSES.

The cupping apparatus consists of—1st, the Scarificator, a square box containing a set—according to the size—of 7, 12, or 18 lancets, which, by means of pressure on the knob, spring up, and passing rapidly over the skin, disappear again in the box. When once discharged, the lancets cannot be used again till re-set; this is effected by pulling the lever, by which the whole set are swept backwards to their former position, where they are once more ready to be
discharged; and a screw, by t
which the lancets, when at hal
as it is called,—that is, when tl
protrude through the slits on tl
—can be regulated to any deptl
are required to cut. This compri
the mystery of the scarificator.
next portions of the apparatus a
glasses; of these, the set consi
three—two leech-shaped glasses, a
and a small one; and one conica
smaller: and the spirit lamp, a
metal vessel filled with spirits of
the flame from the lighted wick bein
to exhaust the air from the glass
manner shown in the next cut.

HOW TO USE THE CUPPING GL
The mode of procedure is first to e
the air from one of the glasses by ins
under it the flame from the spirit
and then immediately applying it
body, when the skin is partly draw
the exhausted receiver, and the
from the atmospheric pressure, is
fixed. After remaining on for
minutes, the glass is removed by ins
the nail under the rim, and perm
the air to enter, when it instantly
off. The scarificator is then to b
on the same part, and, the pur
having been made, the air is again
exhausted from the glass, which is
immediately over the spot scarifiec

n the power of suction exerted cuum, and from the external f the air, instantly bursts from , at first in drops, and finally uid stream, and trickles down glass. As soon as the glass is r enough has been taken, it is the part carefully bathed with er, and a fresh glass applied,

NG THE AIR FROM THE GLASS.

tinued till the amount of blood be withdrawn is obtained, when re to be gently washed, and a wet lint applied as a dressing. ers are in the habit of attracting e surface by previously bathing ing the skin with hot water; not often needed. The great ping well is to know how to he *depth* of the incisions made rificator: in other respects the extremely simple and easy of ce. The amount of blood taken end upon the nature of the t varies, however, from 8 to . The exhaustion of the air is h facilitated by washing the hot water, and drying them, ating them at the fire before spirit lamp, or attempting to he air. The face of the scarifi- ld also be warmed before laying skin.

UPPING consists in merely irritating the skin by applying the glasses only some eight or nine times, and letting each glass remain on for about five minutes.

TO CUP WITHOUT INSTRUMENTS.—The chief article required in extemporaneous cupping is a transparent vessel, so that the operator may see what is going on when it is applied. A wineglass or a tumbler, especially the latter, may always be converted into a very serviceable cupping glass; in default of these, however, or any circular or globular glass implement, a round mug or a tea-cup must be pressed into the service, which, as long as it grasps well, will act as effectually as the best, only that the result cannot be told but by removing it from the body. A few superficial cuts made in a line on the skin with a lancet or sharp penknife, if drawn close together, within the circumference of the glass to be used as a receiver, will answer all the purposes of a scarificator, though certainly a little more painful. The only other article required is a flame to exhaust the air, and this is easily obtained by pouring a few drops of spirits of wine, naphtha, or spirits of camphor, on a little ball or roll of cotton, and dropping it alight into the vessel, taking care to throw it away, and instantly apply the mouth of the glass or mug, just before it has burnt out, to the part indicated, when, if the exhaustion has been perfect, the skin will be seen to rise within the vessel, and a firm grip be taken by it of the part. When crockery has to be used, though the first part of this process cannot be seen, the satisfactory result may be inferred by the firmness with which the article is held. Friar's balsam, tincture of myrrh, brandy, ether, or a small bit of camphor, will, if lighted, serve for exhausting the air; and any one of them, by yielding a broader-bodied flame than the spirit lamp, will, even with the proper glasses, act quicker and better in making a vacuum than the flame from the cotton wick.

CUPRUM.—Copper, which see.

CURCUMA.—The botanical name of the beautiful yellow spice and dye-stuff known as turmeric. See TURMERIC.

CURDS AND WHEY.—Curd is one of the component proximate ingredients of milk, and the coagulum separated from it on the addition of rennet, acid, or alum, when, exactly as the blood is separated spontaneously into the clot or crassamentum, and the water or serum, milk, by the addition of an acid or astringent, is converted into the solid curd or coagulum, and the water or whey, the whey being to the milk what the serum is to the blood. As a light refreshing food for invalids. curds make an excellent article in the dictary of the sick or convalescent person, being easy of digestion, light, and nutritious. See Food, and Milk.

CURRANTS.—These small grapes, at least the dried variety, are more related to the confectioner than the medical man. They are, however, nutritious and wholesome, and are regarded on a sea voyage as greatly conducive to health when made into puddings, especially for children. The fresh currant, of which there are three varieties, the red, white, and black, or *Ribes rubrum*, *R. album*, and *R. nigrum*, is cooling, acidulous, and both refreshing and wholesome, and the most harmless of all our native fruits; and as an antiseptic, and in all scorbutic affections, as well as deranged biliary secretions, may be eaten with great advantage.

CURRY POWDER.—A compound of hot Indian spices, largely used in the East to counteract the consequences of a vegetable diet. As a stimulating condiment for weak digestions, the curry powder is well adapted for Hindostan, but most injurious in these cold climates. One of the most approved forms of curry powder is made by mixing 4 ounces of coriander seed, 2 ounces of Cayenne pepper, 2 ounces of black pepper, and ½ an ounce of turmeric, all powdered and sifted, and intimately blended together.

CUSPARIA.—The Angustura Bark, which see.

CUSPIDATI.—A name given to the teeth by some anatomists, according to their points. See Teeth, and Bicuspidati.

CUTS are either clean incised wounds, as those made by a knife, or jagged and torn, as when inflicted by a saw.

Treatment.—Cuts in general are very easily healed, especially when cleanly cut, as all that is then necessary is to place the sides of the wound in exact position, and by two or three strips of adhesive plaster bind them in their place, when it will heal by what is called the first intention, in from twenty to thirty hours. When the cut is jagged and uneven, the parts must be carefully laid smooth in as natural a position as possible, and a flat compress of lint, soaked in the extract of lead, laid over the part, and a bandage passed round to retain the dressing in its position. Should there have been any large artery cut, it may be necessary to tie it before, in either case, dressing the injury; before resorting to that, however, the ex tract of lead should be placed on it firs and pressure tried to stop the bleedin Some persons apply friar's balsam; bu this causes much unnecessary pain, whil the lead, which answers as well, produce none. See Wounds.

CUT THROAT. See Throat.

CUTICLE.—The covering of the body See Skin.

CUTTLE FISH.—It is only the powdered bone of this animal—the *os sepi* —that is used in medicine, and th merely as a tooth-powder. See Tooth Powder.

CYANOGEN.—A gas composed of on part of nitrogen and two of carbon, formin a bicarbonate of nitrogen. Cyanogen form the base of hydrocyanic or prussic aci and unites with different salts to form cyanurets and cyanides.

CYANOSIS, or BLUE SKIN.— disease depending on an imperfection the heart, by which the blood from th right side enters the left without fir passing through the lungs, giving th body a blue or livid appearance. Se Asphyxia, and Heart.

CYATHUS.—The professional word f a wineglass, or a quantity equivalent an ounce and a half or two ounces, whe ordered in prescriptions.

CYNANCHE.—A medical term implying an affection of the throat, from which according to the word added after, w understand the exact character of th disease, as *cynanche trachealis* (croup *cynanche parotidæa* (mumps).

CYSTITIS.—Inflammation of the bladder. See Bladder.

CYSTOCELE.—A rupture of the bladder. See Rupture.

CYSTOTOMIA.—An old name for removing a stone from the bladder; th operation of lithotomy.

D

D.—This letter stands as a numera and signifies 500, and when written wi a dash over it, thus ($\bar{D}$), stands for 5,00 As an abbreviation, it signifies *doctus*, doctor—as M.D., doctor of medicine.

DAFFY'S ELIXIR.—This very and popular medicine, though for a lo time considered as a secret nostrum, a regarded as an invaluable remedy in cases of colic, or flatulent pains in th omach and bowels, must be considered more in the light of a domestic cordial than a medicinal prescription. Daffy's elixir, which has been for many years vended as a patent medicine, possesses the properties of the compound tincture of cardamoms and senna combined, and by its warm, aromatic, and stimulating qualities, is often of very great benefit in such cases as those which have been indicated above. Since, however, every chemist has been allowed to manufacture Daffy's elixir for himself, no reliance can be placed in the article sold under that name, excepting in the original form of Dicey's Daffy's, made by Sutton and Co., Bow Churchyard. Daffy's elixir should consist of aniseed, parsley seed, fennel seed, liquorice root, senna leaves, red Saunders wood, rhubarb, elecampane, raisins, jalap root, manna, ginger, and proof spirits, in which the several articles are to be digested for 21 days, then strained or filtered, and the clear tincture given in doses varying from a tablespoonful to half a wineglassful, as often as required.

DALBY'S CARMINATIVE.—One of the most deservedly popular of all the patent medicines, and not only a good but a safe prescription in all infantine diseases requiring a remedy of this nature, especially in the irritation of the stomach and bowels. consequent on teething and acidity, whether induced by the milk from the mother or from the nature of the food supplied. Since the patent that once protected this medicine has expired, and it has become public property, each chemist or vender makes the carminative according to his own notions of efficacy: the following formula, however, may be relied on, and as it contains no preparation of opium, may always be given with confidence. Take of—

Powdered aniseed . .	½ drachm.
Powdered caraway seed	1 drachm.
Carbonate of magnesia	3 drachms.
Lump sugar	½ ounce.
Oil of peppermint . .	3 drops.
Oil of nutmeg . . .	2 drops.
Tincture of assafœtida .	½ drachm.
Tincture of castor . .	2 drachms.
Strong decoction of sassafras	6 ounces.

Mix the first three articles in a mortar, then drop the oils of peppermint and numeg, with the assafœtida, on the sugar, and rub all down till they are thoroughly mixed with the other articles in the mortar; the decoction of sassafras is then to be added—a few spoonfuls at a time—till a smooth and well-incorporated mixture is made; the tincture of castor being added last, when the whole is to be shaken, and the bottle kept in a cool place till required, remembering that the mixture must be well shaken previous to giving every dose. From 30 drops, or half a small teaspoonful, for an infant up to a year old, to a dessertspoonful to a child of four or five years, will be generally found sufficient, but the dose varies according to the age and the nature of the affection.

DAMSON.—A species of prune or plum, the *Prunus domesticata*. See PLUM.

DANDELION.—This is one of the most common and disregarded of our native wild flowers and plants, and yet an herb of singular virtues and medicinal properties; and though regarded in England as a rank and disagreeable plant, is in other countries, where it is esteemed for its qualities only, considered in the light of a boon, being eaten as a salad, and employed in many forms as a prophylactic and a medicine. The dandelion, or *Leontodon taraxacum*, belongs to the Natural order *Chicoraceæ*, and has a large, dark, fusiform root, with long, narrow-toothed or jagged leaves, of a fresh, pleasant green colour, with one flower-stem, smooth, fistulous, fragile, abounding in a milky juice, with the flower petals ranged in a circular disc, like the sunflower or marigold. Though every part of the plant is medicinal, its chief qualities reside in the root.

MEDICAL USES AND PREPARATIONS.—The effects produced on the system by the dandelion are those of a diuretic, antiscorbutic, and aperient; on the Continent, however, where it is very extensively used, it is employed in many diseases, and reported to possess a much wider range of operation: many of these imputed effects are, perhaps, more properly attributable to the power of the other drugs with which the plant or its preparations are combined than to the simple action of the dandelion. As a diuretic in all cases of dropsy, from its action on the liver, the taraxacum is a medicine of remarkable efficacy; so also is it in all skin diseases, especially when eaten with radishes, watercresses, and other salads, when its sanitary properties are most marked and decided. As a stomachic in certain states of weak or irregular digestion, the dandelion tea or decoction will be found beneficial; while as a general alterative, boiled with the dulcamara, or *woody* nightshade, with sarsaparilla and sassafras, it becomes, either alone, or accompanied with the hydriodate of potass, a medicine of singular efficacy.

In chronic enlargement of the liver—indeed, in all affections of that organ—dandelion will always be found of benefit, and, if judiciously combined, will yield the most gratifying results.

The only preparations retained of this plant in the Pharmacopœia are the decoction and extract (*extractum taraxaci*). The dose of the former, made by boiling 4 ounces of the cut root in 1½ pints of water, down to 1 pint, is from one to two wineglassfuls twice or three times a day; and of the latter, from 10 grains to 1 drachm, either alone or in combination, as a pill or mixture, from one to three times a day.

DANDRIFF, OR PITYRIASIS.—A genus of scaly disease, chiefly affecting the scalp, characterized by irregular patches of small scales, which repeatedly exfoliate or fall off, but never form crusts.

There are two or three varieties of this disease, named after the colour of the exfoliated skin; some confined to the scalp, others to the armpits, chest, and the lower part of the abdomen. This, like many minor affections of the cuticle, only becomes hurtful to health by neglect; for when the dead, bran-like scurf is left on the skin, particularly at the roots of the hair, it impedes perspiration, and, by blocking up the pores of the skin, becomes extremely hurtful.

TREATMENT.—When in the scalp, the head should be well stimulated night and morning by means of a strong hair-brush, and the free use of a large and small-toothed comb, and the occasional employment of a lotion composed of 2 drachms of borax, dissolved in a pint of rosemary water, applied three times a week.

Should this fail to cure the evil, an ointment, composed of 1 ounce of white cerate mixed with ½ a drachm of creosote, is to be rubbed into the roots of the hair every night for a week; at the expiration of which time the person should have the head thoroughly washed with soap and water, take a hot bath, bathe the head with the rosemary and borax, and with a clean brush the next day remove any exfoliation which may have been thrown out.

DAPHNE.—The botanical name of a genus of plants, some varieties of which are employed in medicine.

DAPHNE MEZEREON. See MEZEREON.

DATE.—A nutritious and wholeso
fruit when ripe and freshly gathered, b
infinitely less so when long kept a
dried. The date is the fruit of a spec
of palm, and is a native of the northe
parts of Africa, Syria, and Abyssinia.

DATURA STRAMONIUM. — T
botanical name of the Thorn App
which see.

DEAFNESS is a functional derang
ment of the organ of hearing, that m
proceed from many causes, both inter
and external. Among the former are
be enumerated some affections of the ne
itself; certain conditions of the bra
as during and after fevers; indigestio
catarrh, and enlarged tonsils. Amo
the external causes of deafness must
included blows, and sudden, violent, a
unexpected noises, as an abrupt crash
thunder, or the discharge of artiller
cold applied to the ear; mumps, or t
enlargement of what are called t
almonds of the ear; and by the formati
of indurated wax in the external passa
or from an excessive secretion of a thi
tenacious exudation. The two latter a
by far the most frequent causes of dea
ness, which they produce by blocking
the auditory passage, and thus preve
the undulating current of air from striki
on the *tympanum*, or drum of the e
Deafness occurring after or during
attack of fever, as in typhus, is alwa
regarded as a favourable symptom, a
prognosticator of recovery.

TREATMENT.—As we have only to co
sider deafness in this place as a sympto
and not an organic disease, the remed
employed must depend upon the ca
which has in the first place given rise
the symptom. When a severe cold
swelling of the tonsils has induced t
loss of hearing, a warm bath and h
fomentation for the throat must be adopte
as advised under catarrh and cold, or t
mouth and fauces washed with an astr
gent gargle. When it follows a long a
debilitated state of the stomach, a cou
of mild aperients, accompanied by quin
or iron as a tonic, must be adopted.
the exciting cause has been a severe blo
or a loud noise, the part must be sooth
by inserting a small quantity of fine cle
wool, so as to break the access of all sou
falling on the tympanum, and applying
warm bran poultice over the external
till the organ recovers its tone. Wh
there is reason to apprehend inflammati
from the injury, three or four leech
should be applied behind the ear, or a

ounces of blood extracted from the nape of the neck by means of the cupping-glasses. Should a mass of hardened wax cause the obstruction of sound, the ear must be fomented for some few hours by repeating a hot bran or camomile poultice every twenty or thirty minutes, till the passage has been so far expanded as to detach the wax from the sides of the tube, when the ear is to be syringed with warm water, or mild soap-suds, till the indurated wax is expelled. This, however, may not be effected for some days, and will require repeated fomentations and syringing before that result is obtained. If the deafness is caused by a thin, fœtid discharge, a small blister should be placed behind the ear, and kept open for a few days by a dressing of savine ointment, a daily syringing with strong soap-suds, and the introduction into the ear of a little cotton, wetted with friar's balsam, every evening, after the last application has been made. Sometimes deafness comes on without any assignable cause; the auditory passage, when examined, being dry, red, and shiny: in this case, a little very finely parted cotton, lightly inserted at the entrance of the external passage, has the effect of collecting the sound into a focus, and conveying every word with intelligible distinctness to the *sensorium*. To effect this, however, care must be taken not to pack the cotton closely, or fill up the whole cavity, for a clear space must be left between the tympanum and the wadding. At night, this may be removed, and a larger piece, wetted with almond oil, inserted in its place. In all of these cases, it is necessary to take an occasional dose of alterative medicine, to cleanse the system of any crudity that, present, might tend to keep up the deafness. The warm bath, a Dover's powder at bedtime, and a bran poultice for the throat, will be found beneficial in all cases arising from cold; while for sore throat and enlarged tonsils, a gargle made of a strong infusion of sage tea and vinegar, or an infusion of rose leaves and burnt alum, will prove the most serviceable remedies.

For deafness consequent on organic diseases of the ear, or affections of the auditory nerve, with their modes of treatment, see EAR, DISEASES OF.

DEATH.—By this term is understood that condition of the animal frame when all the functions which constitute the mystery of life cease to act, and the organized tissues, no longer supported in their integrity by the vital stimulus, run rapidly into decay. Death is indicated by a universal coldness of the body; by a partially open mouth, closed eyelids, and sunken eyes; by an extreme pallor of the face, sometimes showing a yellow or greenish hue; by a lividity of the lips and orbits, and by an extreme flaccidity of all the joints. This suppleness of the joints, however, only endures for a very brief time, except in some cases of poisoning, being succeeded, in a period varying, according to circumstances, from two to six hours, by a general rigidity or stiffening of all the muscular fibres, and by a tension of the ligaments, by which the body becomes, in a measure, one firm and indurated mass. This remarkable rigidity, common to all animal fibre, is professionally known as the *rigor mortis*, or the stiffening of death. As the flaccidity which follows immediate dissolution is but of brief duration, being succeeded by stiffening, so the *rigor mortis* is also but of limited continuance, and though longer in its endurance than the first, in its turn gives way on the approach of decomposition, and as decay sets in, the rigid fibre gives place to the relaxed and clammy muscle, till final corruption leaves no vestige of the once tense corpse.

The means that have been adopted to discover if any spark of life remains in an apparently dead body consist in testing in various ways the respiratory powers, and the nervous susceptibility of the person supposed to be dead. The first consists in applying a very downy feather to the lips, or a looking-glass over the mouth. If one of the filaments of the feather is stirred, or the slightest obscuration or dimness is cast on the mirror, it is held to be an evidence that respiration still exists. Another test formerly known was placing the body on the back, and standing a glass brimful of water on the exposed chest, and carefully noting if any motion in the fluid was perceptible, as the heaving of the chest, however slight, in the act of respiration, would agitate or displace the water. The fumes of strong ammonia held to the nose, and the tickling the nostrils with feathers, were also means at one time employed to impart hope or to confirm the fears of the mourners. However ingenious such tests were, and satisfactory in many cases, there are diseases of the nervous system where death is so closely simulated, that such means would fail to realize any favourable results. See TRANCE, CATALEPSY.

Among the most certain and reliable signs of death are—the firmness of the muscles of the fallen jaw; the drawn-in nostrils, and the livid hue on the lips and round the eyes; and though in some cases of poisoning there is no *rigor mortis*, in general it may be regarded as infallible. When discoloration—the first sign of decomposition—sets in, all further fear of a premature interment may cease, and the body be safely buried: these marks usually begin on the fingers, near the nails, and with the toes and feet. In cases of sudden death, where there are reasons to believe the case to be only one of suspended animation, hot bottles are to be applied to the feet, legs, and armpits; heated tiles placed under the spine, and friction with the hand used over the body, with electricity, and such means adopted as are advised in Drowning (which see), Lightning, Starvation, Exposure to Cold, &c. In such cases, the treatment must be persevered in for six, eight, or ten hours, and, as soon as convenient, either some weak brandy and water or beef tea thrown into the system by the stomach-pump or the enema syringe.

DEATH, REGISTRATION OF.—According to the wording of the Act of Parliament, every death must be reported to the registrar of births, deaths, and marriages of the district in which the death occurs, before the expiration of *eight days*. Some person present at the death, or attending on the deceased at the time, or else the occupier of the house in which the death took place, must attest the report by his or her signature. Any fraudulent declaration made in respect to the death will be punished as a felony, but any accidental mistake as to age, name, or cause of death, can always be corrected within a month from the discovery of the fact.

To simplify the registration, every medical man in attendance on a patient gives the friends, immediately after the death, a certificate, stating age, name, nature of the disease, and the time or duration of the illness, signed with his professional name and address. This certificate some relative, or the nurse, takes to the district registrar, who, in exchange, gives an order authorizing the interment of the body, and which, in turn, is given to the undertaker, who delivers it to the clergyman on the ground. As no minister is permitted to bury a body without this registrar's certificate, the necessity of having it procured at least
two days before the funeral is a self
dent precaution, as many interments
been delayed for a day from the ne
of not procuring the certificate in ti

DEBILITY is the result of
causes; it may arise without any
able disease—indeed, may be the first
chain of symptoms of a coming illnes
it may be the natural consequence o
advanced period of life. In general,
ever, debility results from a long-
tinued or severe attack of fever, inflam
tion, or other form of illness, when
what may be called a characteristic of
valescence.

Debility is sometimes attended wi
quickened circulation, with a pulse f
and weaker than in health; in such
stimulants invariably act as sedatives
the circulation, and lower the pulse,
checking the action of the heart. Deb
is either general or local, and not u
quently becomes chronic, as in that
of it attending malformations, old age,
that state of body to which the cons
tion is sometimes brought by a dissip
life or dangerous practices.

TREATMENT.—General or constituti
debility requires a course of tonics
stimulants, more especially the fo
The kind of tonic employed will de
entirely on the nature of the primary
ease; as a general rule, however,

Food, with malt liquor or wine,
ciously varied, and properly prepared,
always be found the most reliable
efficacious of the dietetic tonics.
siderable judgment is required to d
whether vegetable or mineral tonics,
combination of both, should be emplo
but when that point is decided, a st
course of the means adopted must be
tinued for some time, or till benefit re
from the treatment. For forms of
medicines, see TONICS.

The treatment of local debility co
almost exclusively of cold water and
tion. Local debility, or loss of power
joint, limb, or muscle, must be m
either pumping or pouring cold water
a height on the weakened part, and
wards restoring the circulation by
and steady rubbing. See BATHS, and
PERSION.

Stimulating embrocations and
rary bandages are also excellent
for local weaknesses; while some
with benefit warm adhesive plaste
tight bandaging, to effect the same
pose; but as any lengthened comp
of the muscles, suppression of the

or exclusion of air from the limb s certain to debilitate more than n, such practice must be carefully See SPRAINS.

DUA.—The name of a thin, deli- brane, formed in the womb during y, and thrown off soon after the he child. See WOMB.

DUOUS TEETH.—A term ap- he first or milk teeth. See TEETH.

DUOUS TREES.—A botanical plied to those trees and plants nually shed their leaves and seeds; Latin verb *decido*, to fall off.

INE.—A popular name given to sting or emaciation of the body, responding loss of health, energy, ngth. This state is most fre- he result of some organic disease, npathetically affecting other or- d functions, throws the whole s it were, out of gear, undermines ina of the body, and eventually tal by the exhaustion it entails.

h pulmonary consumption is the generally understood by the term it is equally applied to that scrofu- dition of the lymphatic glands of els called mesenteric disease, by he nutriment from the aliment— e—is prevented from reaching the hen the patient, after suffering a d serious emaciation, sinks from exhaustion, consequent on the ion of new blood. See CHYMIFI-

he TREATMENT of Decline, see PTION, MESENTERIC DISEASE, rs.

OCTION.—A term used in phar- indicate any medicine prepared ng, and opposed to infusion, by he article is simply steeped in water.

ulinary sense, broth is a decoction, coffee an infusion. In preparing al decoctions, the water should be poured cold on the articles, and to boil slowly. When roots, barks, r leaves are employed, the boiling never be continued for more than utes, as after that time the gum- resinous parts are dissolved by the nd the mixtures will become thick y. An iron saucepan should seldom oyed for medicinal decoctions, as, ny of the astringent drugs, it will the mixture into ink. When the n has boiled ten minutes, it should ned through tow or muslin, and set a jug till cool, before being used.

DECOMPOSITION.—The separation of any organic substance or body into the primitive elements of which it is composed.

When the two poles of a galvanised battery are connected with a vessel containing water, and the two gases of which it is composed are separated, no water remaining, that fluid is said to be decomposed, or resolved into its original elements.

There are two kinds of decomposition referred to by medical men—*chemical*, where the addition of an acid substance to a saline mixture may, by decomposing or altering the composition, materially change or affect the properties of the medicine; and *animal* decomposition, which is the mortification or sloughing of a part, or the death of a whole body.

DEFERENS. See VAS DEFERENS.

DEFLAGRATION.—A term used in chemistry for the burning together any two or more salts in a crucible. A mixture, by fire, of sulphur with other substances. See SAL POLYCHRIST.

DEFLUXION.—A term formerly used in medicine to express the discharge of tears and mucus from the eyes and nostrils, as in severe colds and influenzas, derived from two Latin words, to flow down or from any part.

DEFORMITY.—The disfigurements of the body are so numerous, and involve such opposite structures, that they must be treated under one expressive head, and the most significant for all is that of Malformations, which see.

DEGLUTITION.—The act of swallowing; the second stage in the function of digestion, and the sequence of the act of mastication. The process of deglutition is a compound action, calling into play not only the muscles of the cheeks and mouth, assisted by the tongue, but the muscles of the throat also, as well as the three sets of muscles of the œsophagus, or gullet, to propel what is swallowed on its way to the stomach. To avoid repetition in explaining this important process, see article DIGESTION, in the present number.

DELETERIOUS.—Any substance inimical to life, whether solid or fluid, taken into the stomach or applied to the body.

DELIQUESCENT.—Liable to become moist or wet. A term used in pharmacy, and applied to certain salts, which, when exposed to the air, are apt to run into a liquid form, or become deliquescent. Of this nature are all the preparations of *potass*, which, if exposed uncovered to the air, will in a few hours be found in a liquid state. See **Efflorescent**.

DELIQUIAM.—A fainting; a loss of consciousness.

DELIQUIUM.—A chemical term for a distillation effected by an intense heat.

DELIRIUM.—A perturbed and disordered state of the brain, proceeding either from an excess of blood or a great loss of vital power or augmentation of nervous irritability. Delirium, though not a symptom, is frequently a concomitant or result of fevers, inflammations of the substance or membrane of the brain, of reaction after long exposure to cold or abstinence from food, and is often a consequence of both mineral and vegetable poisons. Delirium is easily distinguished from mania, or madness, by the absence of all congruity of thought, the impossibility of fixing the patient's attention to one subject for even the shortest space of time, and by the total absence of that circumventing cunning so characteristic of madness, or by the restless mutterings, incoherent and disjointed talk, in which private matters, family secrets, and long past events are all mingled in a confused babble. The senses of sight, taste, sound, and feeling, are frequently in complete abeyance, though at times one or other will be sensitively acute.

The **symptoms** of delirium, in addition to the sleepless and constant mutterings, are a hot, flushed face, brightness of the eyes, which are sometimes bloodshot, and a quick, jerking pulse, the patient often smiling at his fingers or picking at the bed-clothes.

The **treatment**, when it can be taken apart from the primary disease, consists in general in cutting off the hair or shaving the head, cupping or blistering the nape of the neck, the application of cold lotions or bags of powdered ice to the head, aperient saline medicines, and small doses of morphia, or the watery solution of opium (Batty's); bottles of hot water to the feet, and by keeping the patient in a cool, darkened room.

When it is necessary to give sedatives—which ought not to be done till the bowels have been first acted on by a dose of Epsom or Cheltenham salts—the following preparation may be used with benefit. Take of—

Acetate of morphia	1 grain.
Water	7 drachms.
Vinegar	1 drachm.

Mix, and give two teaspoonfuls an hour *before bedtime*, and, if necessary, another teaspoonful two hours after. Or if Batty's solution is preferred, 20 drops are to be given at the same period, and 10 drops more two hours after, should the dose require repeating.

DELIRIUM TREMENS.—Trembling Delirium, or the Drunkard's Madness, as it is sometimes called, is a species of insanity, the result of a long-continued course of dissipation, or an excessive indulgence in spirituous liquors, and as a disease, is as liable to attack the young as the old; in fact, no period of life is safe from such a consequence where the provocation has been given by a course of intemperance, though from the age of 44 to 50 is in general the time when this disease most frequently shows itself.

Causes, independent of habitual drunkenness or excessive potations of spirituous liquors.—A long indulgence in large doses of laudanum, mental exhaustion, or whatever disturbs or lowers the nervous tone of the brain, are among the predisposing causes of this disease, which may also be excited by sudden abstinence, and the effect of certain vegetable poisons. There are several varieties of this disease, such as that proceeding from serious wounds, the *delirium traumaticum*, &c.

Symptoms.—These arise with a total loss of sleep, with an occasional delirium in which the patient fully recognizes his friends and relatives. A quivering or trembling of the lips, mouth, and hands, and the muscles generally, especially after the least exertion, becomes one of the most permanent symptoms, with an incessant talking; after a time, occasional fits of despondency supervene, in which the sufferer believes himself the victim of some doom or approaching fatality, while a suspicion and dread of his best and dearest friends makes him moody and nervous; these, with frightful dreams, break his rest, and constantly harass his mind and destroy his peace. During all these stages or progressions the pulse is very quick and small, the body cool, and often covered with a clammy perspiration. In the advanced stage of the disease, the delirium is succeeded by coma, a starting of the tendons—*subsultus tendinum*—and a loss of power over the sphincter muscles. This disease, which is particularly apt to recur, is best and most judiciously ameliorated by the careful employment of those means by which it was in the first place induced.

Treatment.—This must be managed with great care and judgment, and [illegible] combine the moral with the physical practice. The patient must be soothed by kindness and attention, all sources of excitement removed, and his mind kept in as cheerful a state as possible, especially from brooding on his imaginary troubles; at the same time, every means of personal danger should be removed from his sight and reach, and, without seeming to do so, a rigid watch kept on all his actions by night and day, while under the temporary fits of depression and gloom. The darkened room, and the silence so necessary in the treatment of an ordinary delirium, would be very injurious in delirium tremens, where air, light, and cheerfulness are such necessary agents in the cure. Whenever possible, the patient's interest must be engaged by being read to, and, as far as can be done without over excitement, his mind occupied by pleasing conversation. When the disease is attended by retching and weakness of the stomach, small effervescing draughts of soda and tartaric acid, with a teaspoonful of brandy in each, should be given every one or two hours; at the same time, a suppository of [illegible] grains of solid opium is to be passed up the rectum, and a napkin, wrung out of cold vinegar and water, applied to the pit of the stomach: if the head is hot or in pain, a cold application may be laid over the brow and temples, and bottles of hot water applied to the feet. By these means when the irritability of the stomach has been subdued, the ordinary treatment may be proceeded with; but should the sickness continue after a fair trial of these means, small draughts of cold water, about half a wineglass, with 5 drops of hydrocyanic acid in each, are to be given every two hours, while a pill of 1 grain of solid opium should precede the taking of the draughts. When the stomach has been rendered tranquil, a couple of the following pills should be administered, and, three or four hours afterwards, the accompanying aperient draught; so that the liver and bowels may be relieved of any offensive redundancy they may contain. Take of—

Blue pill	15 grains.
Compound extract of colocynth	15 grains.

Mix, and divide into six pills; two to be taken for a dose. Take of—

Epsom salts	4 drachms.
Carbonate of magnesia	1 drachm.
Ginger powder	10 grains.
Infusion of camomiles	3 ounces.

Mix in a mortar smoothly, and give the whole a few hours after the pills. When the periods of exhaustion approach, and the patient begins to feel the necessity for the stimulant to which the stomach has become habituated, food of a light but nutritious quality should be given, so as, in a measure, to abate the craving void experienced, and, after a time, spirits in moderate doses. For this purpose it is customary to mix the brandy, rum, or gin, or whatever the spirit may be to which the patient has been accustomed, with the yoke of an egg, or beat it up with milk, tea, or coffee, the attendant using great care in the amount given. But as a warm and diffusible stimulant—one that, while rousing the action of the heart, will gratify the stomach—is the medicine more called for than the potent alcoholic stimulus, the egg flip which we are about to order will be found in all respects better than either of the other more usual forms of giving the spirit; and for these reasons,—considerably less spirit is necessary, the effect of the dose is more diffusible, and the mixture itself more gratifying.

To make Egg Flip.—Beat up three eggs, half a grated nutmeg, half a teaspoonful of ginger, sufficient sugar, a quartern (or four ounces) of any spirit, and a little cold ale, all thoroughly mixed in a jug, to which, when smoothly combined, pour, by degrees, a quart of ale scalding hot; and when, by proper means, the whole is smoothly and properly mixed, give the patient half a tumbler of the compound, to drink as hot and as quickly as possible. Whether it should be repeated or not immediately must depend upon circumstances, but if the stomach has been previously fortified by food, less of the stimulant will be required. When it is necessary to repeat the dose, the flip should be again made hot; but as it is apt to become ropy, or thick, by repeating, only as much should be made at a time as the day's wants may require. As a general tonic and stomachic, to give tone to the stomach, and induce an appetite for solid aliment, either one of the following powders may be given every morning and afternoon, an hour before breakfast and dinner, or a teaspoonful of Gregory's powder, in peppermint water, may be taken at the same periods instead.

Take of—

Dried carbonate of soda	30 grains.
Powdered rhubarb	18 grains.
Powdered ginger	12 grains.
Powdered quinine	6 grains.

Mix, and divide into six powders.

The end of the treatment consists in

supporting the patient over the stages of exhaustion by the warm, temporary stimulants, and encouraging the stomach to find its natural stimulus in solid animal and vegetable food.

Creosote is recommended by some for the sickness; and when other means have failed, but not till, it may be employed. It is sometimes necessary, to relieve the pains in the head, to apply leeches, or cup the patient; but in general, all depletion should be avoided, and relief sought by evaporating ether from the temples and forehead. See Ether.

DELIVERY. See Labour.

DELPHINIUM.—The generic name of some medicinal plants, of which the stavesacre is the most important—a plant now entirely exploded from modern practice.

DELTOID.—The name of a muscle of the arm, so called from its resemblance to the Greek letter *delta*,—a short, triangular-looking muscle, situated on the front of the arm, at the shoulder.

DEMENTIA.—Out of mind, weakness, silliness, idiotcy; a term used to imply a state of mental imbecility, harmless madness. See Lunacy, Mania.

DEMI.—A Latin word, signifying half; as DEMI-BAIN, half a bath,—a French word for a small bath, a hip or foot bath.

DEMULCENTS. — A class of soft, bland, fluid medicines or drinks, and either given in colds and obstinate coughs, to shield the passages from the contact of the cold air, or to protect the tender coat of the gullet and stomach from the action of corrosive or irritating acids or poisons, and also to save the mucous membrane of the urinary organs from the arid action of the water in certain affections of the kidneys and bladder. For these several purposes demulcents are either taken by the mouth, or used as an injection. Barley water, thin arrowroot, almond emulsion, linseed tea, gum water or mucilage, or any decoction of herbs, or ptisans, as they were formerly called, are all included under the name of demulcents.

DENS.—The Latin for a tooth. See Teeth.

DENTAL.—Appertaining to the teeth.

DENTIFRICE.—A tooth-powder or tooth-paste; anything employed to cleanse or beautify the teeth, whether solid or liquid.

DENTITION.—The process of cutting the first teeth, and, indeed, all the teeth, though the term is chiefly confined to the infantine stage. See Teething.

DEOBSTRUENTS.—A class of external medicines which are supposed to have the power of removing obstructions from any part of the body, especially such as chronic enlargements, tumours, &c. Among the most important of this class of remedies must be placed the stimulus of friction, whether with the hand or the flesh-brush; mercurial plaster, iodine, camphor, hartshorn, oil, turpentine, and a few other local stimulants.

DEPHLOGISTICATED AIR.—A term used in chemistry to express atmospheric air from which the combustible or vital element, the phlogiston, has been abstracted. In other words, air from which the oxygen has been removed—air incapable of supporting life or combustion, or choke damp.

DEPILATORY.—Any substance which will remove unnecessary hairs, or hair of any kind. The articles usually sold for this object contain arsenic, the most certain substance known for the purpose; but as any one of the ordinary nostrums requires to be used with great care, they should seldom, and if possible never be employed, or when so, not permitted to remain long on the skin at one time. Caustic potass, and arsenic, or litharge, and quicklime, form the bases of nearly all the preparations vended for this purpose. Depilatories act by entering the pores of the skin and destroying the bulbs of the hairs, causing them to fall off either directly or in a few hours. The only safe article of the sort is a pair of small tweezers, with which, like the Chinese, the hairs may be plucked out. There is a savage method, called the mechanical depilatory, in which a compost of plaster of Paris, or pitch, is spread over the part, and, when dry, plucked off, tearing the hair with the plaster.

DEPLETION.—The emptying, pulling down, or weakening the system. There are several modes by which depletion may be effected, as by bleeding, both local and general, by powerful drastic purgatives, by hot baths, and a violent action on the exhalents of the skin, as by sweating, and, lastly, by a vigorous action on the secretions generally, and by a diuretic effect on the kidneys, reducing the system by the amount of liquid discharge from the body.

Sometimes one, occasionally all these means are put into operation at once, according to the constitution of the patient, and the nature of the disease which has to be reduced. See Plethora.

DEPRESSOR.—The name of a muscle, s that of the *depressor anguli oris*, or epressor of the corner of the mouth. here are two or three sets of muscles earing this name in the human body.

DERBYSHIRE NECK.—A large and rominent swelling of the *thyroid gland* front of the throat, sometimes called onchocele, wen, goitre, enlarged thyroid land, or, from the frequency with which e disease occurs in one portion of England, the Derbyshire neck. See GOITRE.

DERMA.—The true skin of the human ody, sometimes called the dermoid tissue, the scarf skin, or cuticle above it, is nominated the epidermis, from being pon or above the derma. See SKIN.

DESQUAMATION.—Falling off in ales; a term applied to the cuticle of e body when, after an eruptive disease, ch as measles, or small pox, the dead ortion of the skin peels off where the stules have been. This, which generally kes place in from four to six days after e decline of the disease, is always a itical time with the patient, when it is ecessary to guard him from colds of all inds.

DETERGENTS. — Medicines which e supposed to cleanse or remove off om the body anything offensive that ay exude from the skin. In this spect soap, water, and towels form, consistently, the most sanitary of all detergents, y removing the dirt and refuse perspiration clinging to the skin, and which, if ft undisturbed, would, in time, effect me injury to the surface or the constitution. Lotions and poultices act as etergents to ulcers and unhealthy wounds, s borax and water, or honey, applied to he mouth, cleanses it, in cases of thrush, f much of the offensiveness caused by hat disease.

DETERMINATION OF BLOOD.— term used to express the presence of a rger quantity of blood in a part or organ han either should naturally contain. The rm is a very improper one, and would mply that the blood had freaks, and at mes preferred to flow in greater abundance in one direction than another. This, ortunately for human safety, is not the ase. Why blood accumulates at times in arger quantities than necessary in certain arts, proceeds from the *veins* being unable to remove the blood from the part in the ame ratio that it is brought to it by the rteries, and thus an accumulation is stablished. When such a determination, s it is called, is excessive, it is denominated an apoplexy either of the head or lungs, and demands the most active treatment, such as will be found under the heads of APOPLEXY and PNEUMONIA.

DI, DIA, DIS.—Words used as prefixes to many medical terms, and generally signifying *in*, *through*, *to*, or *between*, as illustrated in—

DIABETES. — To run through; a disease of the urinary organs, in which the water, made in excessive quantity, becomes loaded with an immense amount of saccharine matter, and must be constantly voided.

SYMPTOMS.—Great emaciation, with the skin dry, and feeling harsh and loose; loss of energy and strength, a haggard or anxious countenance, a constant thirst, and an appetite sometimes ravenous, at others languid, but generally attended with depression or indigestion; the bowels are confined, and the tongue either clean and red, or white with red edges, and a brown streak in the middle. The gums are red and spongy, the mind is disturbed and oppressed with a settled melancholy, and the sleep short and feverish. From the first there is a constant desire to make water, and the quantity voided in the day varies, according to the character of the disease, from seven to twenty pints a day in ordinary cases, though in some the quantity far exceeds this, and has even amounted to 180 pints in twenty-four hours. In these cases, the urine is so loaded with sugar, that if a few drops of the water fall it rapidly evaporates, and leaves a crust of powdery sugar behind. The thirst, as a natural consequence, is always in proportion to the quantity of water voided.

The CAUSES of this formidable disease are very numerous: the excessive use of spirituous liquors, granular disease of the kidneys, or long-standing irritation of the bladder and urinary passages, drinking cold water when greatly heated, luxurious living, and a long residence in a hot climate, are among the most general remote causes of diabetes.

TREATMENT.—As the frequent desire to make water, and the quantity voided, from the first forms the prominent symptom, so it continues to the end, or till the disease is permanently arrested. At first, however, the urine is free from all evidence of sugar, and it is not till the second stage of the disease that it becomes specifically heavy, of a pale green colour, and smelling, with the breath of the patient, like new hay, or the aroma of apples. Before proceeding to lay down a course of medicine, or proposing a regimen, it must be stated that vigilant care is to be taken to prevent the patient receiving any substance, solid or fluid, possessing saccharine qualities, or from which sugar can be eliminated by digestion; consequently, *all vegetables*, fruits, or articles containing sugar or starch must be avoided, and only animal substances and acid drinks administered instead. As this disease is more properly a species of diseased digestion than organic derangement, the treatment is more one of time and regimen than active medical practice, and besides an occasional aperient pill, as that prescribed below, and a nightly dose of opium, to allay the nervous excitement, with a warm or vapour bath, and the use of the flesh-brush to restore tone to the skin, the treatment resolves itself into a system of animal food,—fish, poultry, meat, eggs, curds, whey, and milk, with a little cold water, or water with a small quantity of vinegar or citric acid mixed or dissolved in it; this, in fact, must (prepared in different forms) constitute his entire food, bread, beans, peas, farinaceous food, and vegetables of all kinds being strictly avoided. But if some change becomes necessary, some spinach, turnip-tops, or young nettles may be substituted, which, when well boiled, will form the best and least objectionable food of a vegetable nature he can take. At the same time, change of scene and gentle exercise should be adopted.

Aperient Pills.—Take of—

Aloes, powdered	2 scruples.
Jalap	1 scruple.
Ginger	12 grains.
Castile soap	enough to

make into a mass: divide into twelve pills. Two pills to be taken at bedtime, when required.

Blisters and cupping over the kidneys are sometimes recommended; but in general, the vapour or warm bath, and friction, will be found more beneficial than the depleting process, which, if ever adopted, must be employed with great caution. When tonics are required—which they will be as soon as a diminution in the amount of the urine takes place—they should consist of an infusion of quassia and cloves, with 10 drops of the tincture of the muriate of iron in each dose, three times a day; or else the steel made into pills, such as the following, and one taken every four hours, and a wineglass of the above infusion three times a day.

Take of—

Purified sulphate of iron	24 grains.
Quinine	12 grains.
Rhubarb	10 grains.
Ginger	10 grains.

Mix, and add extract of gentian enough to make into a mass, which is to be divided into twelve pills.

There are three varieties of this disease, —the *Diabetes insipidus*, *D. mellitus*, and *D. chylosus*. As a general rule, diabetes is a very tedious disease, and when it terminates fatally, does so by involving other organs in a diseased action, under which the body sinks.

DIACHYLON.—The name sometimes [illegible] given to the adhesive plaster, both spread and unspread; though the term strictly belongs to the litharge plaster—*emplastrum lithargeri* or *plumbi*. It is [illegible] occasionally as a discutient dressing, [illegible] most frequently employed to make, [illegible] mixed with rosin, the sticking or adhesive plaster.

DIAGNOSIS — DIAGNOSTIC.—[illegible] discern or know thoroughly; the [illegible] by which physicians recognize the [illegible] which teaches them to distinguish [illegible] disease from another, as by a *progn*[illegible] they are enabled to foretell whether [illegible] malady will run a favourable or a [illegible] course.

DIAPHORETICS.—A class of [illegible] cines which exercise an almost [illegible] action on the skin, producing perspiration [illegible] as sudorifics produce sweating,—the [illegible] drugs which induce the one action [illegible] the other—the difference in dose and [illegible] of combination making the only difference. Among the most important of this [illegible] drugs are antimony, ipecacuanha, [illegible] ammonia, vinegar, opium, camphor, [illegible] contrayerva.

DIAPHRAGM, OR MIDRIFF.—A broad, fanlike, tendinous muscle, that, acting as a shelf, separates the [illegible] cavity of the trunk into two parts—[illegible] upper or thorax, and the lower or [illegible] domen. Besides serving the purpose [illegible] partition, and preventing the organs [illegible] the upper from pressing on those of [illegible] lower part, the diaphragm serves as [illegible] the chief agents in the function of [illegible] tion, and is the part chiefly involved in [illegible] spasmodic affection called Hiccup.

DIARRHŒA, or a looseness of [illegible] bowels, is an affection to which every [illegible] sex, and condition is liable, and when [illegible] excited by sudden changes of the [illegible] or the exposure of a hot body to wet [illegible] cold, is most frequently induced by [illegible]

indigestible substance taken into
mach; and though common to all
of the year, is far more prevalent
ıtumn than at any other period of
lve months, showing that it is fre-
due as much to atmospheric in-
as to partaking in excess of fruit,
les, or cucumbers—the articles most
ly accused of producing the disease.
xious gases, bad drainage, and im-
ventilation are prolific exciting
of diarrhœa is now universally
d, and whenever practicable, such
s should be adopted for correcting
uses as will, for a season at least,
hem inoperative for mischief.

YMPTOMS of diarrhœa are a weight
easiness in the lower part of the
n, accompanied with griping,
less severe; flatulence, succeeded
uent feculent evacuations, and
tended with nausea and vomiting,
hirst, a white-coated tongue, dry
d cold feet.

TMENT.—In general, diarrhœa is
elieved by taking a mild aperient,
ly a moderate dose of castor oil,
en the griping is severe, from 20 to
s of laudanum with it. When,
r, this does not check the evacua-
nd as, when unrelieved, diarrhœa is
legenerate into cholera, it becomes
ry to adopt some direct practice.
niting is to be checked by effer-
draughts, with or without brandy,
er to the feet, and a teaspoonful of
of kino in a wineglass of water,
our, for two or three times, or till
els are checked in their action; or a
the following mixture can be substi-
ery quarter or half hour. Take of—

bonate of ammonia	½ drachm.
pared chalk . . .	6 drachms.
ract of catechu . .	1 drachm.
permint water . .	6 ounces.
its of sal volatile .	1 drachm.

nd give two tablespoonfuls, as
l above. When there is much
drachm of laudanum is to be added
mixture. As small a quantity of
as possible should be taken, but as
oiled rice or rice pudding eaten as
mach will digest with comfort;
gs are also of service; vegetables,
r, fruits, broths, or any liquid
n—except a small quantity of
and water, if required—must be
avoided. It must be borne in
that the above doses are designed
lts; that unless specially ordered
prescriptions, opium or laudanum are never to be given to children; and that the quantity of kino or chalk mixture must be regulated according to their ages.

When the diarrhœa has been subdued, care must be taken, in returning to the ordinary diet, that the stomach is not overloaded, especially by hard and indigestible meat, or by flatulent vegetables; and if there is any pain or indigestion, two spoonfuls of infusion of camomile, in which 10 grains of carbonate of soda have been dissolved, should be taken twice a day for a few times, till the stomach recovers its tone, when, if requisite, a compound colocynth pill may be taken to cleanse the alimentary canal. See Cholera, Dysentery. For the diarrhœa of children, see Infants, Diseases of.

DIASTOLE.—One of the two motions of the heart; diastole is the dilatation, as systole is the contraction of that organ. See Heart.

DIATHESIS.—A medical term to explain the natural or preternatural condition of the body; as when a person has an hereditary taint in his system, he is said to have a scrofulous diathesis.

DIATHROSIS.—An anatomical name for a loose form of joint, consisting of two orders—the hinge, and the ball and socket—such as the elbow and the shoulder.

DIDYMI, or DIDYMUS.—The Testes, which see.

DIES.—A day; or *dies critici*, critical days. See Critical Days.

DIET.—Man has been supplied by nature with an organization of stomach capable of digesting and assimilating into nutriment every substance in the animal and vegetable kingdom not actually poisonous. Many of these valuable gifts, however, are rendered inoperative, or less serviceable, from an ignorance in knowing how properly to prepare them for food. The ancients were in the habit of curing nearly all acute diseases by a system of dietetics—in fact, by a more or less total abstinence from aliment of all kinds; and there is little doubt but one half of the maladies now besieged and driven out of the body by an artillery of potent medicine, might and could be cured by a course of proper diet alone, but for the impatience that, refusing the necessary time, and demanding an instant recovery, rejects the safer but more tardy system, for the more rapid but at the same time more injurious plan of medicine.

Climate, and the mode of life a person pursues, have a great effect on the diet: the warmer the climate, the less and the poorer the food the man eats; the colder the region, the richer and more abundant the aliment he consumes; while the man of sedentary occupation in all latitudes eats less than he who takes exercise or has an active employment.

Though modern science has classified all kinds of food according to the great proximate principles they contain or yield, and separated them into those which produce fluids and flesh, and those that generate heat; and though it has been proved that vegetable aliment will afford all the properties necessary to yield those proximate principles, it has been found that man requires a due mixture of animal and vegetable aliment to produce a perfect nutrition.

When it is remembered how frequently relapses are caused in illness by a too hasty return to the customary dietary, and how the indulgence in a small quantity of some long-debarred dish or favourite viand will undo months of care, the importance of a strict and rigidly obeyed system of diet cannot be too strongly impressed on the mind of all. It is impossible to lay down a rule of dietary to be observed in all cases of illness, though general principles will be better understood in relation to that subject when we come to treat of "Food," and divide that important theme into those substances which generate heat, repair the waste of the solids or the flesh, and those that reproduce the fluids of the body; then, according as the disease is a fever, the wasting of the body as in atrophy, or the corruption of the fluids as in scurvy, the kinds of food most serviceable to each, and those most objectionable, will be readily understood.

The system that once prevailed of giving broths and gravies, under the delusion that the patient was imbibing strength with every spoonful of the concentrated essence of beef, mutton, or chicken, has fortunately been long discarded, and medical men now know that a few dry fibres of long-boiled beef will go farther to build up a shattered constitution than a quart of the richest gravy ever extracted from animal tissue.

It is now, also, a patent fact, that the most nutritious food, or that substance containing the largest quantity of those principles necessary to build up the living frame, is, if exclusively lived upon, as poisonous as arsenic or hemlock, destroying the body by a lingering mirasmus, or wasting. In the same way, the drinking of malt liquor, *which some persons* consider adds bone and muscle to their bodies, taken without solid food, is, as a nutriment, a perfect fallacy; not so, however, with the man who, with half a pint of cold water and a penny loaf, quenches his thirst and satisfies his hunger, for, under a healthy digestion, he will convert the aliment he has taken into twenty times the farina and sugar—the basis of the malt—that sixpenny worth of the best porter could yield his system, and that with the immediate certainty of its being converted into bone and muscle. See DIGESTION, and FOOD.

DIET DRINK.—The name given to the compound decoction of sarsaparilla, sometimes called the Lisbon Diet Drink.

This excellent tonic and restorative is prepared by boiling an ounce and a half of sarsaparilla, half an ounce of sassafras, and two drachms of guaiacum shavings and mezereon in three pints of water, adding a small piece of carbonate of soda. After simmering slowly for three hours, the liquor is to be poured off the roots, which are then to be put in a clean iron mortar, and well bruised, so as to break up the pith of the sarsaparilla. The ingredients are then to be returned to the saucepan, the liquor poured on them, and the whole once more slowly boiled for an hour, or till the quantity is reduced to a pint and a half, when the decoction is to be strained through muslin, and when cold, half a tumbler taken twice a day.

DIET FOR INVALIDS. See FOOD.

DIETETICS.—A course of dietary taken according to medical rule.

DIGESTION.—The ancients placed the seat of the soul in the stomach, and so far as they understood the word *animus*, and regarded it as an emanation from a vital function, giving birth in turn to the divine *anima*, or reason, their theory was neither inconsistent nor absurd.

All their penetration and experience—for they were close observers as far as their knowledge went—demonstrated to them that on the integrity and perfect harmony of this central organ the well-being of every part of the frame depended; and though ignorant of the manner in which the function was carried on, and only dimly guessing at the result, they well knew that not only the mental health, but the strength and integrity of the body, depended upon some standard of excellence generated in the *ventriculus*, or stomach.

It is not with the stomach as an organ, however, that we have at present anything to do, but with the operation that takes place in its cavity or structure;

this operation, the most important of all the vital functions, and the lever, which, like the pendulum of a clock or the water-power of a mill, is the agent that sets all the mechanism of the body in motion, causing by that conjoint action the wonderful and complicated phenomenon of life,—this operation, called the function of digestion, we shall now proceed to describe.

That the reader may fully understand the operation of this great principle of the human economy, and learn that it is the motive-power to every action of the body, the source of life and health, and the chief of all living functions, he is requested, by a close inspection of the accompanying cuts, and the following description, to make himself fully acquainted with the science of digestion.

The organs and parts which either directly or indirectly enter into or assist in the operation of digestion, are the lips, teeth, cheeks, tongue, palate, the salivary glands of the mouth and the lower jaw; the *pharynx, œsophagus* or gullet, the stomach, duodenum, liver, pancreas, and gall-bladder; the lacteals, mesenteric glands, lymphatic system of vessels, and, finally, the thoracic duct. See ABSORPTION.

The function of digestion is, according to the organs employed, divided into three stages:—

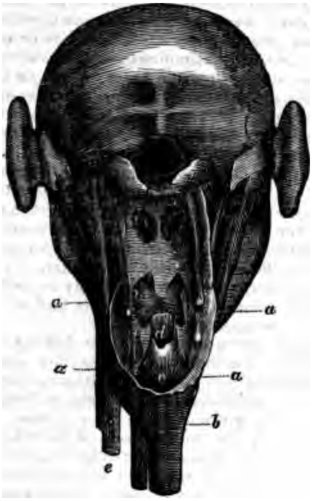
1st. The Reception and Preparation of the Food.

2nd. The Digestion of the Prepared Aliment; and,

3rd. The Extraction of the Nutriment from the Digested Aliment, or the separation from the chyme of its concentrated essence, the CHYLE.

THE RECEPTION AND PREPARATION OF THE FOOD.—As an ever-watchful guard over the portal of the mouth, nature has placed two vigilant sentries, that nothing offensive to the system or inimical to the integrity of the body may pass into the mouth. These sentinels are the eyes and the nose—the one being placed as a check on the other,—for it rarely happens that what pleases the one is allowed to pass unless it equally gratifies the other; that substance that has gained the full approbation of both being generally such as is the most wholesome and beneficial to the system. Besides performing the duty of rejecting or approving the food offered to the mouth, the nostrils, as the seat of the sense of smell, exercise a powerful influence on digestion; as the pleasurable excitement produced on those nerves by the aroma of the meat directly stimulates the salivary glands, causing them to pour out their secretion abundantly into the mouth, there to be mixed with the aliment swallowed; for the larger the amount of saliva thrown out, the more perfect will be the digestion. This effect, popularly known as "making the mouth water," is so necessary to a good digestion, that whether the meal is a hot or cold one, when the stimulus of hunger is absent, persons are in the habit of exciting a languid appetite, and provoking a discharge of saliva, by what are called condiments—such as piquant sauces, vinegar, catsup, spices, or improper quantities of salt. Saliva so unnaturally forced is, however, never so beneficial, even when in quantity, as that regularly secreted by the stimulus of the olfactory nerves; on this account, it is always advisable with weak appetites to have the chief dish at dinner hot, so that the nostrils and the palate may be healthfully stimulated by the aroma and savour of the viands partaken of.

The eye and the nostrils having approved of what is offered, the food is conveyed to the lips, and grasped by the incisor teeth, whose duty it is to cut and divide what is given into smaller pieces, assisted in this by the point of the tongue. When the substance is too hard to be cut by the incisors, it is, by the joint action of tongue and mouth, placed under one or other of the set of breakers—the tusks, or canine teeth—which having broken up the substance into fragments of a convenient size, the whole is conveyed to the grinders, or molar teeth, where, by a lateral motion of the lower jaw on the upper one, the food is ground into a soft, smooth paste; the two large glands—one in each cheek—called the *parotids*, those beneath the tongue and the lower jaw, known as the *sub-lingual* and *maxillary* glands, pour out in all directions their proportion of saliva, which, by the steady action of mastication, chewing, or grinding, is thoroughly incorporated with the food in the mouth, till the aliment is completely comminuted, softened, and incorporated with the saliva, when, by the action of the muscles of the cheeks, the closing of the mouth, and the assistance of the tongue, the masticated food, gathered into a heap, is placed on the back of the tongue, and at the entrance of the bag called the *pharynx*, or the commencement of the œsophagus, or gullet. Opening into the pharynx are two apertures above, leading out of the nostrils, and below which hangs the UVULA; and two passages below,—one in front, commencing from the *larynx*, or organ of voice, and by means of the windpipe and bronchial tubes terminating in the lungs; and one behind the last—the œsophagus, or gullet—which terminates in the stomach.



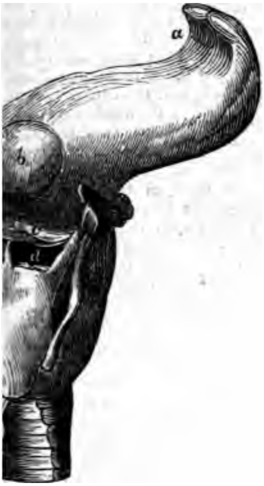
No. 1.—BACK VIEW OF THE HEAD AND NECK, THE BAG OF THE PHARYNX CUT OPEN, AND SHOWING THE INTERIOR ORGANS.

a, a, a, a, The cut edges of the Pharynx. *b.* Termination of the bag in the beginning of the Gullet, or Œsophagus. *c.* The Glottis, or entrance to the organ of voice; and *d.* The Epiglottis, or valve that covers the opening into the air-passage. *e.* The Windpipe. The opening above is the back of the mouth, and the sides and two arches over it represent the *Tonsils*, *Fauces*, and the *Uvula*, between the two arches. The oval apertures in the soft palate above are the openings from the nostrils into the bag of the pharynx.

To enable the food when swallowed to escape the windpipe, where it would cause suffocation, and insure its entrance into the gullet, the following provision has been made. The mastication having been completed, and the food collected on the top of the tongue near the base, the next action is that of *deglutition*, or swallowing; to effect this, a set of muscles which *elevate* and at the same time pull forward
the whole of the pharynx, are
operation, by which the larynx
of voice, is raised up and *pulled*
tongue; a small oval cartilage
glottis, that stands up like an c
door over the *glottis*, or entranc
windpipe, being by that acti
down over the opening like th
box, and effectually preventing
passing into it while so closed.
instant, and while the pharynx
stretch, and the entrance of t
protected by the tongue, the n
food is forced into the pharynx,
its tube, the gullet, when the
stantly sink, the epiglottis flies
air again enters the windpipe.
having reached the gullet, is
along its tube by the action of th
sets of muscles with which it is
(see ŒSOPHAGUS, or GULLE
finally reaches the stomach, co
by mastication and deglutition,
stage in the process of digestion

**THE DIGESTION OF THE P
FOOD.**—The food, having been
into the stomach by the gullet, is
in a mass at the *fundus* or bas
organ, where it is at once surro
a sharp acid fluid, or the gast
secreted from the arteries supp
lining membrane of the stomach.
penetrating solvent, as in a w
assisted by a constant but imp
motion of the stomach, the alime
goes a combined process of m
and chemical action, till every p
mass, completely saturated by t
juice, breaks down under its pot
becomes a soft, smooth, semi-liq
the gastric juice acting from wi
wards; for as all additions mac
the progress of the digestion are
the centre of the mass, the firs
received into the stomach is the f
upon, and the last received the
digested. Within a space vary
three to five hours, digestion, alw
rapid in youth than in age, is
completed. During the process,
the substances on which the mea
made are completely decompose
chemical agency of the gastric ju
of the fixed air taken in with
and the carbonic acid gas libera
the saline ingredients which hav
into the meal, are given off, causi
in excess, that flatulence and e
so common with dyspeptic pat
those suffering under some form
of stomachic weakness, or indige

the function of digestion has
pleted, a portion of the soft pulp
by the muscular power of the
o the lower or *pyloric orifice* of
, or the gate leading into the
The presence of the digested
his rigidly closed exit has the
using it to open and permit the
the quantity present into the
, and then instantly to close



THE LARYNX, OR ORGAN OF
WITH THE TONGUE IN THE ACT
LLOWING; SHOWING THE PRO-
MADE FOR CLOSING THE APER-
THE FOOD OR DRINK PASSES
E TONGUE INTO THE PHARYNX.
t 1.)

ongue, with point raised to the roof
outh. *b*. The food, collected into
essing down, as it glides over the
e tongue, *c*, the Epiglottis, a kind
valve, over *d*, the opening into
is, which is seen below, terminating
dpipe, or trachea.

hen a fresh supply has been
nd brought to the *pylorus*, the
s once more opened for the
the food, and then effectually
e same process taking place
minutes, till the stomach has
ed of the whole of its contents.
itive is this opening from the
to the bowels, that should any
ielding substance be brought
ly to it in the digested food, it
is refused a passage, and sent back, or retained till softened or fit to pass, or till the aperture, wearied by incessant appeals, reluctantly permits it to escape. This contest of a crude, indigestible substance to force a passage into the bowels causes that obtuse pain so often experienced after partaking of some hard and improper dietary, or by those who swallow before having fully masticated their food.

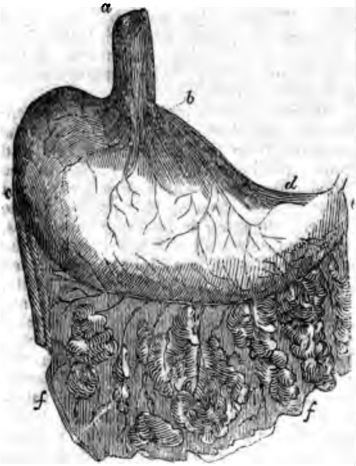
THE EXTRACTION OF THE NUTRIMENT FROM THE DIGESTED ALIMENT, or the Conversion of Chyme into Chyle.—The soft and pulpy mass having passed through the pyloric orifice into the duodenum, now receives the name of the *chyme*, and undergoes the last stage in the process of digestion.

What the saliva and gastric juice were to the dry, hard food received by the stomach from the mouth, the bile and pancreatic juice are to the chyme in the duodenum, upon which they are poured directly after entering that portion of the bowels, changing it into *two* substances, one containing all the nutriment of the digested aliment, in a highly concentrated state, known as the *chyle*—a rich, white, creamy fluid,—which is immediately absorbed by the lacteal vessels, and carried to the mesentery; and the other a solid, refuse, feculent mass, stained with the colour of the bile, which is carried downwards, through the small and large intestines, to be discharged from the body, propelled in its course by the natural action of the bowels, that action being excited by the stimulating properties of the bile contained in the substance passing through them.

The chyle having been conveyed to the mesentery by the lacteals (see CHYLIFICATION), is there made to pass through two sets of lymphatic glands, where it is still more fully sublimated, till, finally blending with the fluid brought by the lymphatic vessels in the *receptaculum chyli*, it passes up the *thoracic duct*, and terminates in the right side of the heart, where it replenishes the wear and waste of the body, by giving to the blood those vital elements of which it had been robbed by circulation and the construction of the tissues. All the fluid waste or *débris* of the body in which any particle of good remains, though too impoverished of itself to be any longer of benefit to the frame, is, by a beautiful provision, carried from every part of the surface and interior of the system, by the two sets of lymphatics, to the reservoir of the *thoracic duct*, where, being mingled with the chyle, it is carried to the heart, to be converted into arterial or vital blood.

There are a few facts connected with the subject of digestion, which it is necessary should be explained in this place.

The time that the food takes to pass through its first period of digestion, or reduction into a soft, homogeneous pulp, depends upon the quantity of saliva mixed in the food when swallowed, the amount and quality of the gastric juice, and the nature of the food itself. Animal food is more rapidly digested than vegetable: the flesh of a full grown than that of a young animal; thus, beef and mutton are preferable to veal and lamb. Fresh meats are easier of digestion than salted provisions, and roast and boiled should, for the same reason, be selected in preference to those prepared by baking, broiling, or frying; the latter, of all culinary modes of dressing food, being the most injurious, not only as respects the texture and properties of the meat, but from its rendering the food extremely difficult of digestion. And finally, repose or rest after a meal facilitates digestion in the same ratio that exercise or mental anxiety retards it.



No. 3.—The stomach, with its omentum or caul.

a. The Gullet, terminating at *b*, the Cardiac entrance of the Stomach. *c.* The Great or Left Extremity, where the food is collected for digestion. *d.* The Right or Small Extremity, to which the digested aliment is passed to reach *e*, the Pyloric Opening, or gate leading into the duodenum. *f, f.* The Omentum, with its glands and vessels.

All aliment has been divided into four groups, called the *aqueous;* the *saccharine*—which yields the proximate principles of sugar, vinegar, starch, and gum; the *albuminous*—yielding, from animal fibre, albumen, and from vegetable, gluten; and the *oleaginous*, or substances containing fat and oil.

To insure perfect health, it is necessary that an entire harmony should exist between both processes of digestion, or between the reduction or digestion in the stomach, and the conversion of the chyme into chyle in the duodenum and mesentery; for the stomach may digest most abundantly, and transmit a large quantity of chyme into the duodenum, while, from some fault in the bile, the lacteals, or lymphatic glands, only a small quantity of chyle may reach the heart, the great bulk of the digested aliment passing from the body by the bowels, the system becoming thin and emaciated, as in atrophy or mesenteric disease.

Nearly all the diseases of the body proceed from some disorganization of the digestive functions. When the elements of the saccharine group of aliments do not properly assimilate, or resolve themselves into their proximate principles, an excess of one or the other is formed, as of sugar or oxalic acid, leading to the formation of the diseases known as *diabetes* or stone. The mal or diseased assimilation of the albuminous foods leads to those diseases in which an unnatural excess of albumen in the blood is generated, while a mal-assimilation of the oleaginous division of aliments results in attenuation, and an excessively active assimilation leads to the state of fatty deposition we call obesity, or corpulence.

Though man is an omnivorous animal, and, as shown by his teeth and the size of his stomach, formed to feed on anything the teeth or gastric juice can reduce into pulp and digest, he cannot live for [illegible] time, without injury, *on any one kind [illegible] food*, however rich it may be in yielding the best principles of animalization; [illegible] man confined exclusively to the richest food, will be starved in a shorter time than he who makes his diet on *two* of the [illegible] impoverished items.

All animals, according to their digestive apparatus of teeth, paunch, reticulum, [illegible]mach, and intestines, have the power of [illegible]tracting from the food they consume [illegible]

les which assimilate nearest to their
sh; the dog, lion, and *carnivora*
ly, living on flesh, which yields in
abundance the constituent prin-
f muscle, require a much simpler
ment of organs; tusks and in-
to seize and rend, are their most
nt teeth, and instead of grinding,
n or the horse, they merely divide
od by an up and down clashing
of the jaws, while one stomach and
intestinal tube serves all the pur-
f digestion.

cow, on the contrary, who has to
grass into flesh, requires a much
omplicated apparatus. She is, in
t place, supplied with a lip that
serves the purpose of a hand,
g the herbage and bringing it to
arp edge of her incisor teeth, by
she reaps a meal before virtually
it; and by means of a set of
s in the throat, passes her food into
stomach, called a cud, where, as in
pan, covered with a warm, salivary
it lies macerating till the receptacle
l, or the animal, impatient for its
aving laid in a sufficient store, lies
o her repast, and luxuriates in a
, dreamy state, by what is called
g the cud.

simple contrivance of muscles, she
power of bringing back into the
a portion of her softened food,
she immediately places between her
flat teeth, which, like mill-stones,
tely comminute and reduce to an
lp the grass she has just gathered,
g all the pleasure by this process
ratified palate, and in the same
s degree as a man does, masticating
mer, or a savoury viand, to which
e gives a double relish.

n the cud has been chewed long
the food is swallowed, but instead
sing into the first stomach, or
, it enters the *omasum*, a small
h, where it is subjected to another
of maceration, till after a due time
ses from the second into the third,
ach proper, where it undergoes a
f digestion analogous to our own.
this last receptacle it passes into the
, where the second stage in the pro-
effected, and the principles so
ry for the animal's welfare are
ed from the chyme, and after
ing over a great extent of intestines,
reach the heart, to replenish the
of the body, and build up the ani-
frame.

Next to a healthy state of the organs, the *time* at which food is taken, and the mode in which it is cooked, are subjects of great importance to insure a healthy digestion. See DINNER. Many people have an idea that the boiled juices of animal fibres, such as broths and gravies, are excellent modes of cooking, full of nutriment, and that for a patient nothing can possibly be better,—one of the most culpable mistakes that can be entertained, and which, unfortunately, medical men have greatly encouraged.

It should be generally known that *liquids cannot be digested;* the stomach can only *absorb fluids* and digest solids, and that if a man were fed exclusively on broth that contained the nutriment of six pounds of meat in each pint of liquid, he would as effectually perish from starvation, after a certain number of days, as if he had been debarred from every atom of food for the purpose of effecting that result. Broth thickened with bread crumbs, barley, rice, or vegetables, is of course less objectionable, for solids are then left, on which the stomach can act. Unleavened bread, raw vegetables, unripe fruits, cheese, pastry, and shell fish, are, as a general rule, decidedly objectionable. To insure a good digestion, the stomach should not be left for more than five hours without aliment. The amount taken should be regulated by discretion, the person leaving off rather before satiety than after repletion, and, most of all, he should eat steadily, masticate completely, and rest from all exertion or mental anxiety for the best part of an hour after his chief meal. See FOOD.

DIGITALIS.—A well-known narcotic wild flower, botanically known as the *Digitalis purpurea*, or purple foxglove. See FOXGLOVE.

DIGITUS.—The Latin for a finger or a toe, each finger of the hand being distinguished by a special significance. See FINGERS.

DILATATION. — The expansion or opening out of any organ; and though in one sense it is sometimes applied to the heart, it is in reference to the iris of the eye that the term is most frequently employed. See IRIS.

DILATED PUPIL.—A condition of the delicate membrane of the eye—the iris—by which medical men in general understand the state of the patient's brain. A contracted pupil has always been supposed indicative of congestion and great oppression on the brain, as in apoplexy, compression, and other diseases; while a dilated pupil pointed out the influence of some narcotic on the nerves of the head. But though to some extent these two conditions of the eye prognosticate truly such effects, they are by no means to be strictly depended on, but must always be taken with reservation.

In youth the iris is remarkably excitcable, and often dilates towards night to a great extent, a peculiarity some persons carry with them through life. Again, though a contracted pupil is given as a proof of congestion, cases occur where, in the apoplexy of advanced life, the pupil is *dilated*, and in poisoning by opium the iris is frequently closely *contracted*, while, according to the rule, it should be *dilated* by all narcotic poisons. Hydrocyanic or prussic acid, on the other hand, always has the effect of dilating the pupil, and of even keeping it so for a long time after death; while with other symptoms—an assistant guide to an opinion—it is evident that neither the dilatation nor contraction of the pupil of the eye can be trusted alone as a proof of an excited or an oppressed brain. See PUPIL.

DILL. — A common aromatic carminative plant, like fennel, growing profusely in most of our gardens, — the *Anethum graveolens*, an herb belonging to the Natural order *Umbelliferæ*.

Though the whole plant is aromatic, the chief property lies in the seeds, which, as a warm, stimulating carminative, are either eaten in their dried state, distilled to make a cordial water, or expressed to extract an essential oil, of which they contain a large quantity. The only preparation of dill to be found in the shops, except the oil, is the essence, of which 3 or 4 drops on a lump of sugar may be taken whenever a carminative is required; and the dill water, the dose of which is from 1 to 2 ounces. See WATERS.

DILUENTS.—Anything to weaken or dilute; a class of medicaments employed to quench thirst, dilute and make thin the thickened blood, and cool the system, preternaturally heated by fever or disease. Balm tea, toast and water, barley water, whey, lemonade, and such like articles, belong properly to the class of diluents.

DINNER. — Every wholesome substance which a man eats can be made, by a good digestion, to yield those principles upon which the body is built, supported, and hourly replenished. The variety and quantity of the viands, therefore, are of far less importance than a *sufficiency* of one or two, and a *regularity* in the time of taking them. Dinner, therefore, which in health and sickness is generally the chief meal in the day, should always—if a man wishes to keep his digestion healthy, and let his system enjoy the full benefit of the food he eats—be timed in just proportion to his working hours, or the time when the body is in action, and the mind in operation.

The stomach, if possible, should never be left more than five hours without some amount of replenishment; and nothing can be more injurious than for a person whose avocations call him to business—whatever its nature—early in the morning, to delay his chief meal till his work is entirely finished, and he, dressed and languid, can sit down in the evening to preside at, but not to enjoy, a loaded board.

As the mental and bodily vigour are greatest at midday, so are the powers of digestion then at their highest point of activity; and if put off and tampered with by a mouthful of biscuit or a draught of bitter water, an injury is inflicted on an organ which, when called upon at five or six o'clock to perform its duty, does so with only half its morning's vigour; the consequence is, that not half the nutriment is extracted from the aliment taken, and the body, deprived of its proper sustenance, draws on the system for the stamina of which it has been deprived, and in this manner debility is established, and loss of physical strength and mental energy begun, and an unhealthy system of wear and replenishment inaugurated, that, sooner or later, must lead to valetudinarianism or disease. The hour a person dines, then, becomes one of the most important considerations in the code of his physical ethics. It should be so arranged as not to exceed five hours after his breakfast; and as it is to the man, as to his stomach, the chief meal of the twenty-four hours, it should always be a full and abundant repast. As we have already said, the *quality* of the food taken is quite secondary to the *quantity*, for *bulk* is the natural stimulant of digestion, and bulk at that hour the stomach demands. A man who truly regards his health had better be called a gourmand, and eat two dinners a day, than slight his stomach at one or two o'clock with a biscuit and glass of ale, and at five or six sit down to a profuse table. See BREAKFAST, and DIGESTION.

DINNER PILLS.—This is a species of stomachic tonic, which persons of languid appetites are in the habit of taking daily as a provocative to appetite: to render them such, however, they must be taken at least an hour before dinner, that they may have time to dissolve and stimulate the stomach. There are several formularies for making these pills; the following, however, may be relied on as a warm and grateful stomachic. Take of—

Barbadoes aloes . . .	12 grains.
Powdered canella alba	10 grains.
Powdered ginger . .	6 grains.
Dried carbonate of soda	24 grains.

Mix. Extract of gentian or camomiles enough to make into a mass, and divide into twelve pills; one to be taken an hour and a half before dinner.

DIOPTRA. — A surgical instrument used only in the practice of midwifery, and employed to dilate the uterus for the easier expulsion of the fœtus. Modern science and humanity have, however, fortunately abolished so dangerous a practice.

DIPHTHERIA.—A sudden and dangerous disease of the throat, bearing in many of its general features a strong resemblance to croup. Diphtheria appears to have been a disease entirely unknown to the ancients, and, indeed, even by our most recent medical nosologists, or classifiers of diseases according to their types and specialities, diphtheria was unrecorded, and has, in fact, only manifested itself within the last ten or twelve years. The true pathology of this disease has not yet been made known, and though much has been written respecting it, the facts published have generally had reference to individual cases, and are not deduced from an extensive group of results, or a large and satisfactory experience.

The want of authentic information in respect to the history is equally felt in regard to the treatment of diphtheria; and although the leading symptoms have naturally led to a seeming uniformity of practice, every medical man may be said to treat it after his own theory or judgment.

The reader who consults this article, and wishes to form a correct idea of what diphtheria is, and why it is so sudden in its effects, and often fatal in its result, is requested to refer to the article Croup, and peruse that carefully, before considering the present subject.

We have already said that diphtheria strongly resembles croup; like it, the disease comes on suddenly, runs its course in a very brief space of time, and, when fatal, proves so in the same manner: unlike croup, however, it is not, as a general rule, confined to full-bodied or leuco-phlegmatic infants and children, but attacks both youth and adult age, preferring the weak of body and delicate of constitution.

The *distinctive characteristic* of this disease is the *formation in and around the fauces of an adventitious membrane* (see Croup), which, blocking up the entrance of the larynx, or the organ of voice, proves fatal by preventing all access of air to the lungs.

Symptoms. — These vary very much according to the age and temperament of the patient; they commence, however, with a train of general febrile symptoms —a hot, dry skin; constriction and pricking in the throat; great anxiety, with much debility; and a small, thin, compressible pulse. As the disease advances, all the symptoms become intensified; the constriction in the throat inducing a short, dry, and ineffectual cough, with great heat and redness of the fauces; the difficulty of breathing increasing with great rapidity.

The seat of this disease seems to lie almost entirely in what is called the pharynx, the membranous bag which, like the open portion of a funnel, commences at the back of the mouth, and terminates in the tube of the gullet (see Digestion), developing itself, however, more particularly round the rim or entrance of this membranous bag, the *fauces*, where an inflammatory action early develops itself, causing the constriction, heat, and pain experienced, and, in consequence of the profuse secretion thrown out, impeding the entrance of air into the lungs, and producing the oppression at the chest and difficulty of breathing which form the most serious and irksome symptoms of the entire disease.

Treatment. — From the rapid and serious nature of the disease, the practice in diphtheria must be both energetic and prompt; but as there is frequently a great loss of power, care must be taken not to weaken the system unnecessarily by any powerful action on the bowels; a little castor oil, or a compound rhubarb pill, will be sufficient for an adult, and such a powder as the following for a child.

Take of—

Powdered scammony .	6 grains.
Powdered jalap . . .	5 grains.
Grey powder	3 grains.

Mix. Such a powder may be given to a child of twelve years, or reduced in strength to *one third* or *one half*, according to the age of the child, whether nine or six years old.

With young children it is always advisable to commence the treatment by immersing the patient up to the throat in a warm bath. In all cases, however, the throat must be immediately attended to by being enveloped in a hot bran poultice repeatedly changed. The throat having been protected, an emetic should be given as quickly after as possible: 10 grains of ipecacuanha, with 1 grain of tartar emetic, mixed in a little warm water, will be found effectual for a full-grown adult. For children, the antimonial and ipecacuanha wines, mixed in equal proportions, and given, according to the age, in doses from a teaspoonful to a dessert or tablespoonful, will be found the most suitable form of emetic. If, after an action on the bowels, the operation of the emetic, and the steady use of the hot fomentations for two or three hours, the inflammatory state of the fauces has not materially subsided, or there should be an increased uneasiness, the poultice must be discontinued, a blister placed on the throat, directly under the jaws, the whole of the fauces rubbed over with lunar caustic, bottles of hot water kept to the feet, and one of the following powders given every half-hour. Take of—

Powdered sugar . . .	1 drachm.
Calomel	18 grains.
Tartar emetic . . .	4 grains.
Ipecacuanha	12 grains.

Mix thoroughly, and divide into twelve powders. For children under twelve years of age, *half* the above quantities are to be divided into the *same number* of powders, and one given every half-hour.

Some practitioners treat this disease by employing repeated emetics; but as this produces much exhaustion, the practice is more than questionable. There are two objects sought in the mode of treatment we have just advised —first, to excite a healthier action in the fauces, effected by the caustic within and the blister without; and secondly, to cause the reabsorption of the false membrane or the indurated exudation, to effect which the calomel and antimony powders are administered.

After the application of the caustic, a gargle will be required to wash the mouth and throat; for this purpose a strong decoction of sage leaves is to be made, a scruple of burnt alum added to each pint, and the decoction used warm, as a wash and gargle, every one or two hours, or oftener if necessary. Care must be taken to guard the patient from all draughts of cold air, while the feet are kept steadily hot by means of bottles of water or heated bricks. (See cut No. 1 to DIGESTION.)

DIPLOE. — The cellular cancellated tissue found between the two plates of all bones, but more particularly confined to the osseous cancellations found between the flat bones of the skull.

DIPLOMA.—A royal charter, or a prince's letters patent; also a physician's, surgeon's, or a clergyman's licence to exercise his art or function, granted by the college or synod, after a rigid examination to test the qualifications of the candidates who seek to practise their several callings.

DIPLOPIA, OR DOUBLE VISION.—A surgical disease of the eye, affecting the optic nerve and the retina. The peculiarity of this disease is, that the person sometimes sees two, three, and even more likenesses of the one object at once, sometimes when looking with both eyes; at others he sees naturally with both, but unnaturally with one. The disease is by the best authorities now regarded as purely functional, and as the exciting cause is supposed to reside in the stomach, bowels, and liver, the treatment consists in covering up the eyes for a time from light and irritation, and subjecting the patient to a course of aperients, alteratives, and eventually tonic medicines.

DIRECTOR.—A curved instrument of steel, with a groove to direct the edge of the knife. The director is used only in cases of lithotomy, and is sometimes called a sound, or staff.

DIRT EATING.—This is a peculiar disease, to which the negroes, both of Africa and the West Indies, are peculiarly liable, and one to which they seem at times impelled against their will, as if driven into a morbid state by the power of some invisible but supernatural agency. The negro becomes low spirited and dejected, shuns his work, seeks solitude, and, refusing all communion with his fellows, retires into some seclusion, where he dies

a peculiar kind of clay, which soon
his system, and he dies in a loath-
ate of emaciation and corruption.
CUTIENTS.—A class of medicines
y surgeons to dissolve or dissipate
ed humours, swellings, tumours,
Like deobstruents, however, such
as are more fanciful than real; for
mercury, lead, and ammonia are
red among the best of the class,
s one agent of more value than
such combined, as a *bonâ fide* dis-
, and that is the human hand.
n with a soft hand—with or with-
d or oil—is the only reliable dis-
in the whole catalogue.
EASE.—Any falling off from health,
t we regard as a standard of phy-
nity.
out minutely entering into the
ogy of the subject, disease may be
be present when any organ or
re of the body is changed, and its
n impeded or unnaturally altered
haracter.
ses vary in their mode of occurrence,
causes which excite them, and in
ration and course: nor is that all;
ffer also in their type, form, and
nature. Diseases are divided by
ms into several orders or classes,
—
EMIC, or diseases peculiar to certain
s, as agues to fenny districts, goitre
yshire and Switzerland.
EMIC.—Diseases attacking many
generally at the same time, and
g at irregular periods, such as
measles, small pox, cholera.
ADIC.—A disease that generally
one or two individuals at a time,
y be both endemic and epidemic at
e time.
AGIOUS and INFECTIOUS forms of
are now generally considered sy-
ms, and embrace all diseases com-
ted by one person to another.
EDITARY, are those affections trans-
from father to son, or handed down
e generation to another.
INUED, are such diseases as run
urse without any interruption of
mptoms.
RMITTENT, or PERIODICAL, are
hich have intervals of health be-
he stages of the disease, as in ague.
TTENT diseases are such as have
mate augmentation and diminu-
heir symptoms.
OSURAL are those diseases when
same alteration in the organ or

part, as in diseased lungs, or liver, or stomach.

FUNCTIONAL.—When the duty or function of an organ only is out of order, or deranged, as in indigestion, excessive secretion of bile, &c.

SPECIFIC are peculiar and distinctive diseases, such as syphilis, cancer, and scrofula.

MALIGNANT.—These are structural diseases, in which the texture has become so vitiated that no remedy can be found to afford them benefit or cure; such as in cancer, fungus—hæmatodes.

Besides these varieties, all diseases are divided into the

ACUTE,—a disease short in duration, but *severe* in its consequences, and the

CHRONIC,—one of *long* duration, but of *slight* severity.

Diseases are still further subdivided into CAUSES and SYMPTOMS: of the former there are four,—the Proximate, the Remote, the Predisposing, and the Exciting, cause. The final classification of diseases, in which they are ranged according to their types and characteristic features, is a branch of education called Medical Nomenclature, or Nosology, which see.

There are many affections which bear a special name, such as Bright's Disease, Mesenteric Disease, and a class of ailments called Diseases of the Skin: for an account of such, the reader must consult the articles under their respective heads.

DISINFECTANTS.—A class of medical agents to counteract and destroy the noxious gases and offensive odours arising from bad drainage or other causes, and render them harmless to the human body. Foremost in importance, before all artificial means of purification, are the natural agents AIR and WATER. Among the best of the mineral and vegetable agents are ranked chloride of lime, chloride of tin, vinegar, creosote, tobacco, tar, and the fumes of burnt aromatic herbs, such as spikenard and lavender; with strict attention to cleanliness, and a good ventilation; however, few persons will require the use of disinfectant remedies, but where, from foul drains, bilge water, or any other causes, offensive smells are discovered, *they should be at once corrected* by the use of either the chloride of lime or tin, as nothing sooner tends to breed fever where there is any predisposition, than the inhaling of noxious exhalations.

DISLOCATION.—A displacement of a part; the term, however, is confined to the separation of the bones entering into the formation of a joint, from their natural situation and arrangement, and thereby rendering the articulation for the time being useless.

Dislocation, or *luxation*, as it is surgically termed, is divided into complete and incomplete: *complete*, when the displacement is perfect, or when the head of one bone is *completely* drawn out of the socket in the other, or when the articulation has been thoroughly disunited; *incomplete*, when the joint has only been started, and the bones are merely sundered, but not absolutely separated.

Dislocations are characterized according to their situations—as a dislocation *upwards*, *backwards*, *forwards*, and *downwards;* and are yet further distinguished into simple and compound. A simple dislocation is when no injury is inflicted on the skin or muscles. A compound dislocation, when the integuments and flesh are ruptured.

Dislocations are accidents of very frequent occurrence, and may happen to almost every bone in the body, and are usually effected by sudden falls or severe blows. It sometimes happens that dislocations are accompanied with a fracture of the same bone, when, if the fracture is near the head of the bone, it is generally impossible to reduce the dislocation till the fracture has been first reunited.

Symptoms.—All dislocations are characterized by the same symptoms; these are, pain and immobility of the member, with shortening of the limb, accompanied with great pain if moved; a depression in one place, and an enlargement or swelling in another; a turning in or out of the foot or hand, according as to whether it is the leg or arm that is displaced. When the injury occurs to the hip joint, the knee is drawn up and pressed on the thigh of the sound leg, while if it is the shoulder joint, the patient invariably grasps the injured member by the elbow with the opposite hand. It should be always remembered, that when elderly people meet with heavy falls or blows, the chances are, from the greater brittleness of their bones, that they have sustained a fracture, and not a dislocation.

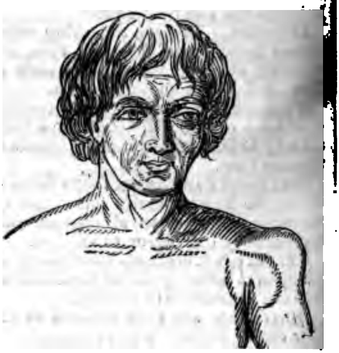
Dislocations occur most frequently in what are called the ball and socket joints, and next in the hinge, or *ginglymus* articulation.

Ball and Socket Joints.—Under this head we shall embrace the shoulder-bone, fingers, hip, toes, the lower jaw, and collar-bone.

The *Treatment* in all cases of dislocation is so nearly alike, that it may safely be generalised, except in a few instances, which will be specified in their proper place.

The first general rule to be remembered is, that all dislocations should be reduced *as quickly as possible after they occur,* as what with the internal laceration of ligaments, capsules, and tendons, and the pressure established on the vessels by the displaced head of the bone, severe swelling almost immediately takes place, which every hour augmenting, not only adds greatly to the suffering of the patient, but materially increases the difficulty of the reduction when it is performed.

In long-standing cases, or where some time has passed since the dislocation, the muscles become so resistant that even the power of the pulley fails to overcome their opposition. In such cases, it is found necessary to bleed the patient in an upright position, and by a large opening, so as to produce sudden sickness or fainting, and so relax the muscular tension, and enable the reduction to be effected. When bleeding is inadmissible, a nauseating dose of tartar emetic or ipecacuanha must be given to produce the same relaxing effect; or where these means cannot be carried out, an injection of tobacco must be employed instead, and immediate advantage taken of the consequent languor to reduce the dislocation.

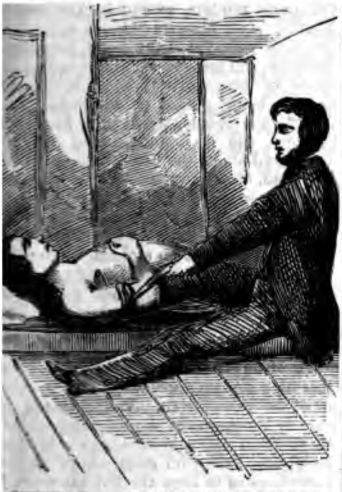


APPEARANCE OF A DISLOCATED SHOULDER.

Dislocation of the Shoulder.—When the bone of the arm is displaced, it is either outwardly, inwardly, behind, or below: in whatever aspect it may be, however, an apparent cavity will be noticed where the fulness of the joint should be, and corresponding projection observed in an pposite direction, unless the head of the one has been pressed into the arm-pit, or ehind, under the shoulder-blade. The nnexed cut shows an outward dislocation f the head of the shoulder.

The most painful of these four forms is he downward dislocation, for then the one presses on the whole congeries of erves and arteries, on their way to supply the arm with sensation and vitality. n the majority of cases, the extension, s the process of pulling the bone into its lace is called, should be made in a direction nearly opposite to the position of the ead of the bone.

There are several methods adopted for he reduction of this accident, but the wo following will almost always be ound successful. The patient is to be placed on his back on a mattress, or the quab of a sofa, laid on the floor, his head upported by a pillow in the manner hown in the following cut. A damp towel is then to be folded smoothly round the arm above the elbow. Upon this the operator ties a strong handkerchief, or making a hitch knot with a jack towel over it, throws the remainder over his shoulders, and having removed his right boot, takes his seat on the mattress, and placing the heel of his foot in the patient's arm-pit, either grasps the handkerchief and with both hands pulls with a slow, steady strain upon the arm he has previously bent in the manner shown, or, if the jack towel is used, he makes the extension or stretch by means of his shoulders, while he holds the arm in his hands, the heel in both cases making the counterpoise. Having, by a steady extension, gradually drawn out the head of the bone, and brought it in front of the cavity in the shoulder-blade, the slightest bend of his shoulders, or relaxation of the handkerchief, causes the stretched muscles suddenly to contract, and draw the bone into the socket with an audible crack. In female cases and younger persons, or those of delicate constitutions, the following plan will generally be found sufficient:—The patient being seated in a high-backed chair, an assistant, standing on the uninjured side, places his left hand under and across the arm-pit, while with his right hand, spread on the top of the shoulder, he grasps and keeps firmly in its place the shoulder-blade, and in this manner makes the counterpoise or extension. The operator then grasps the bent arm above the elbow, and steadily pulls the limb till he disengages the head, when, either moving it a little inwards or outwards, according as the dislocation has been in an outward or inward direction, and at the same time slightly relaxing his extension, the head, as in the other case, will glide with a crack into its place. Much in this operation depends on the firmness with which the assistant keeps the shoulder-blade in its place, for if that is not done the operator will, of necessity, pull both arm and shoulder, and be no nearer the end for which he manipulates.



REDUCING A DISLOCATED SHOULDER.

As soon as the arm is reduced, a sling must be made with a handkerchief, and the folded arm carried in it for not less than a fortnight, to allow the muscles and tendons to recover their tone.

If the reduction has been attended with much pain, and there is any swelling or tenderness of the joint, it will be well to foment the shoulder with warm bran poultices.

Dislocation of the Wrist and Fingers.—The wrist is either dislocated upward or downward. The mode of reducing such an accident is for one person to grasp the arm with both hands, while the surgeon, making extension with the hand, uses either his thumbs or fingers to depress or elevate the wrist at the proper moment. A bandage is then to be passed partly over the hand and wrist, to support the joint, which will require some time to recover its usual strength.

The fingers and thumbs are, in general, easily reduced by a little extension. When, however, the muscles are strong, it may be necessary to take a piece of firm tape, on which a clove hitch having been made, is drawn tight on the next joint, and while one person holds the hand, the other makes extension by the tape, till the reduction is effected.

SHORTENING OF THE LEG IN DISLOCATED HIP.

Dislocation of the Hip Joint, or Thigh.—Of all the dislocations to which the body is liable this is unquestionably the most serious in its consequences, and at the same time the most difficult to reduce. The ligaments placed by nature round it for a protection are so numerous, the muscles of the hip so short and strong, that, all combined, the difficulty experienced in overcoming the natural resistance of so many powerful levers makes the reduction of this accident a task of extreme difficulty.

Fortunately, the strong guards placed round this articulation protect it, in a great measure, from accidents; still, the cases of such a dislocation are by no means rare, and may occur at all ages and among either sex, though those who most frequently suffer from such a misfortune are the young and the old. Among children and infants, unfortunately, it is more frequent than is generally supposed. Rough or careless nursemaids not unfrequently drop the children entrusted to them, or allow them to fall, and, not seeing any immediate injury, keep the fact from the mother, who, perhaps, only weeks after, discovers something amiss in her child by its crying when washed, or by its incapacity to walk, but, ignorant of the cause, trusts to rest or t
effect a cure, till, too late, she d
her child to be a cripple, and perm
deformed by a shortened leg.

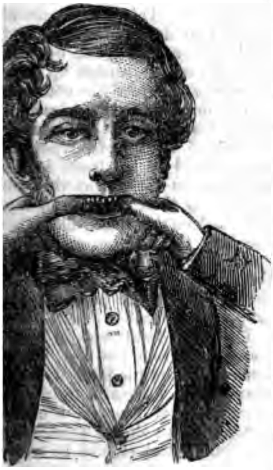
The falling over a piece of timb
very trifling obstruction, is suffi
lead, either in childhood or age,
misfortune. Old people are liabl
accident from the relaxed state
tendons and muscles, only it is ve
complicated, in their case, with fra
the neck of the thigh bone, mal
many instances, a hopeless acciden
symptoms, as already stated, are a s
ing of the limb, with the knee s
forward, turned outward, or res
the opposite thigh, and the toe
touching the ground, or pressing
instep of the other foot.

Being a ball and socket joint, t
idea would be that this dislocatio
be reduced as easily as that of the s
by making a *fulcrum* of the hee
setting aside sex, the extreme del
the parts renders, except in the
youths, such a mode seldom ad
In such cases as have been me
however, the method often succeed
mode of procedure is as follow
patient being placed on his back
mattress, a sheet, passed in a br
between the legs, and carried o
below and above the body, is faste
the head, either to the foot of a la
a staple, or some other firm pur
towel is then passed round th
above the knee, over which a ja
is next passed with a clove hit
the surgeon extends by throwing t
end over his shoulders, first pla
heel in the groin, and, grasping t
guides it with his hands as he
extension, till it springs into the

In strong and adult persons,
this plan seldom succeeds, and th
must be resorted to. When thi
case, it is customary to pass anoth
sheet from the opposite side ac
body, and make its ends secure
former, so as to keep the patient
fixed. To the jack towel attach
knee, the line from a double bloc
is then fastened, the pulley bei
fast to some resisting object, or
on a line with the floor. The
now takes his place by his pati
grasps the thigh to guide it, as an
or two if necessary, with slow ar
pulling extend the limb, till the
having brought the head to its
position, gives the word for a trifli

ightly placed, the bone with a
rt sinks into its socket. It is in
ion of such dislocations as these,
in strong muscular men, when
t of straining can overcome the
of the muscles, that the bleeding,
etic, and such relaxing means,
entioned, must be adopted before
t is unbound or left.
o severe an accident, it will be
to enjoin some days' total rest
erting the limb by the slightest

ATION OF THE ANKLE AND
he accident to the foot, like that
nd, is either backwards or for-
s in that case, the leg must be
d by one, while another extends
in a line with the leg till the
oment arrives, when the foot is
ed up or back to meet the bones
. A bandage, as in the case of
must be placed round to support
y. It not unfrequently occurs
cation of the foot, that there is
of the upper portion of the
small bone of the leg. In such
e fracture must be attended to
reduction of the joint. The dis-
t of the toes must be treated in
manner as that of the fingers.
ATION OF THE JAW.—This is a



CING A DISLOCATED JAW.

ning accident to see but by no
icult to cure; for as the person
finds himself in a moment with an immovable jaw, and incapable of speech, with a mouth wide open, he can only by motions indicate what has happened. This accident is most frequently caused by a fit of gaping, though a blow on the side of the face when the mouth is open, or a fall, have caused it. The treatment consists in seating the individual in a chair, when the surgeon, having enveloped both his thumbs in strips of lint, places a thumb on the back of the lower jaw, one on each side, and while his fingers grasp the chin, he presses firmly downwards on the teeth as he brings the jaw a little forward and upward with his fingers, till the heads spring into their sockets. So rapidly and so forcibly does the jaw close, that unless he has well protected his thumbs, the operator may expect a very severe bite.

The collar-bone and also the ribs are sometimes dislocated, but as both are much more frequently fractured, and nearly the same treatment is adopted in both cases, we shall defer a description of such accidents till we come to Fractures.

DISLOCATION OF HINGE-LIKE JOINTS.—Foremost among this order of articulations is the elbow joint, and next in importance that of the knee; and though these are sometimes by a violent force dislocated, fortunately they are so powerfully bound round and protected by ligaments, that such accidents are very rare, and only from a very high fall on the feet, by a railway collision, or a restive horse dashing its rider against a wall, or some other extremely forcible injury, can a dislocation of such firmly-locked articulations be effected.

The previous advice given in respect of the treatment of dislocations generally should be borne in mind in the accidents we are about to refer to with even more than ordinary attention. When once satisfied of the nature of the injury, not an unnecessary moment should be lost before proceeding to the reduction of the mischief, as every minute's delay not only adds greatly to the suffering of the patient, but by the rapid swelling that succeeds complicates the treatment.

DISLOCATION OF THE ELBOW.—As three bones enter into the formation of this joint, it admits of several varieties of luxation, both backwards and forwards—that is, the joint of the forearm may be forced behind the bone of the arm, or it may be driven up in front of it; again, the two bones of the forearm may be dislocated from each other in several ways. The two most general forms, however, are the backward and forward dislocation.

There are three modes of effecting the reduction of such accidents, which we give in their proper order.

1st. The following treatment will generally succeed with youths and children:—The patient is to be placed in a chair, and while one assistant grasps the arm, and by counter-extension keeps the limb stationary, another, taking the forearm by the wrist, gradually extends the limb, as the surgeon, seated by the patient, grasps the member above or below the elbow, and by means of a steady pressure of either his thumbs or fingers backwards or forwards, as the nature of the accident may demand, forces the bones into their proper place. When the muscular power resists such force, a sheet must be passed across the patient's chest and made fast to the wall; a towel is then to be wrapped round the wrist, and the line of a pulley attached to the hitch on the towel, and while the assistant at the arm and the surgeon at the elbow, as in the former case, repeat their efforts, the other assistant, by means of the longer lever of the pulley, makes a gradual and steady extension.

2nd. The patient and surgeon being seated on separate chairs, the latter takes the limb in his hands, and, steadying his knee on the style of his chair, places the hollow of the arm, or the side of it, against the point of his knee, and, bending round the arm, endeavours to force the bones back to their natural position, the kneecap of the operator acting as a *fulcrum*, and often effecting what a direct strain on the muscles could not perform—a reduction.

The 3rd method is only a modification of the second, and consists in seating the patient on the foot of a bed, and, making a fulcrum of the bedpost, bending the dislocated limb upon it; the surgeon using his hands, as an assistant bends the arm, to aid the action by the pressure of his fingers.

Some surgeons have succeeded in reducing the injury by using the round arm of an easy chair instead of the knee or bedpost.

Great care must be taken after the reduction, not only in keeping the arm in a sling for some weeks, but in applying warm fomentations round the joint, or lotions of sugar of lead and vinegar, made warm, to reduce the inflammatory action which is sure to supervene.

Dislocation of the Knee Joint and Kneecap.—Like the elbow, the knee may also be displaced backwards and forwards, and also inwardly and outwardly, as well as having the bones of the leg themselves separated from each other. Considerable force is often necessary to reduce a luxation of the knee joint, and overcome the muscular rèsistance; but in consequence of the large articulating surfaces of this joint, the bones, when once brought down, glide easily into their places.

The mode of treatment is much the same as that already described. A firm counter-extension, by means of a sheet, must be made by the thigh, and extension then established from the leg, which must be kept partially bent during the operation; a towel, secured in the ordinary manner by a clove hitch knot, is in the first instance to be adopted for making the extension; the surgeon keeping his place by the knee, to assist, with hands and fingers, the operation. When greater power is required, the towel must be joined to the pulley, and extension again made till the reduction is effected.

The Kneecap, or Patella, is very liable to be displaced, either outwards, inwards, or upwards. When this little [illegible] bone is forcibly driven from its place, it is generally pushed over the protuberance of the bones, when it lies as it were in a hollow, from which it requires some art to extricate it. This is generally effected by pressing suddenly on that edge of the bone farthest from the joint, by which means the other end is canted up over the bony enlargement, when the contractile power of the muscles at once draws it into its place over the joint. When this cannot be effected, the leg of the patient, who has been placed on his back, is to be raised and bent as far as possible towards his face; it is then to be suddenly flexed or bent back on the thigh, till the heel touches the hip; the surgeon, as he does so, with one hand presses, as before explained, on the rim of the bone, and quickly opening the leg again, the patella glides into its proper situation.

The after treatment in both of these dislocations requires rest, warm applications to soothe the joint if necessary, and evaporating lotions if there is much inflammation or heat in the part, and a bandage or an elastic kneecap support to the limb, which should be worn for some months.

There are several other minor dislocations, especially those of the vertebræ or spinal column; but as these latter are beyond surgical aid, it is quite unnecessary to enter upon the consideration of such accidents. For compound dislocations, and those attended with broken or comminuted bones, the reader is referred to the article FRACTURE.

DISPENSATORY.—The name of a medical book, which, in addition to containing the whole "Materia Medica," or history of all the drugs and medicaments used in the practice of physic, embraces an account of the manner in which each article is prepared, with directions how to compound all prescriptions. A dispensatory is a work containing *materia medica*, pharmacy, and the Pharmacopœia in one volume, and forms the authority and reference of every chemist, druggist, and medicine vender.

DISTILLED WATER.—This purified water, so necessary for the proper preparation of all chemical and medicinal compositions and prescriptions, is very seldom to be met with, from the trouble it takes to prepare.

When drawn from a still, water not only loses many of its impurities, but has the advantage of being freed from those particles of insect life with which it is generally loaded.

Though distilled water is difficult to obtain, every household can procure an equivalent almost as good by boiling a few quarts of water for some minutes, pouring it into a jug to cool, and finally straining it through a piece of charcoal, and keeping it in a jar well corked. No water should be given to an invalid to drink but such as has been so treated. See FILTRATION. For the distilled aromatic cordial waters, such as aniseed, caraway, pennyroyal, mint, cinnamon, and others, see WATERS.

DISTOMA HEPATICUM. — The name of a small worm found in the liver and gall-bladder.

DISTRIX.—An affection of the hair, which causes each hair to split into filaments.

DIURETICS.—A class of medicines which act on the kidneys, and cause an increased discharge of water from the bladder.

There are few diseases in which medicines of this nature are not of infinite service; but in dropsies they become of paramount importance.

Diuretics belong to the animal, vegetable, and mineral kingdoms.

Among the mineral class are to be included all the preparations of potass, sulphur, sweet spirits of nitre, antimony, &c. The vegetable kingdom comprises squills, onions, digitalis, tobacco, ammoniacum, colchicum, juniper, turpentine, broom, and camphor; while from the animal kingdom we obtain castor, musk, and cantharides. For the doses of each, see the article itself.

DIVERTICULUM.—A receptacle; a term sometimes used by physicians to express a reservoir or cavity, in which a fluid could be received if necessary.

DODDER.—A parasitical plant which grows about different herbs. The dodder which grows upon thyme was formerly held in great esteem as a medicine favourable for all melancholic diseases, from its action on the spleen and liver.

DOG, BITE OF. See HYDROPHOBIA.

DOG ROSE. — The wild hedge-rose, whose seed-pods are commonly called heps. The *Rosa canina* is used in medicine as an astringent and refrigerant, its fruit being made into an agreeable confection with sugar and gum, and occasionally given in relaxation of the bowels, or as a vehicle in which to administer powders to children. The only preparation of the plant is the *confectio rosæ caninæ*.

DOG-WOOD.—This common hedgerow tree, whose twigs are so often cut for switches, has been greatly extolled for the tonic properties said to reside in its bark, which is reported to be equal to cinchona bark. As a substitute, no doubt it might be given with benefit.

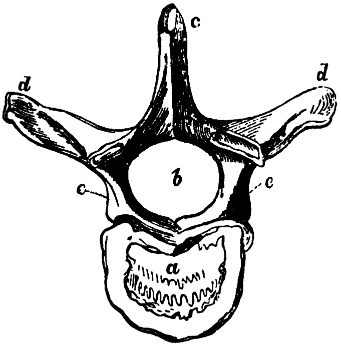
Dog-wood is a species of ash, and highly esteemed by the makers of gunpowder, from yielding the finest charcoal.

DOLICHOS PRURIENS. See COW-ITCH.

DORSAL, from *dorsum*, the back.—Belonging to the back; such as the dorsal muscles, the dorsal vertebræ; of the latter there are twelve. The spinal column, or the *vertebræ*, as the bony sheath of the spinal marrow is called, is divided into three sets of bones, named respectively *cervical*, *dorsal*, and *lumbar* vertebræ: each set of bones, though generally alike, are individually different.

The dorsal vertebra consists of a body, a ring, or circular cavity, for the reception of the spinal cord, two transverse processes, and one spinous process, which latter, in the first and second bones, partakes somewhat of the character of that process in the cervical vertebræ, which stands out from the bone almost in a straight line; but as the dorsal vertebræ descend, their spinous processes become more *hooked*, and point more downwards.

Besides the processes already given, each vertebra has two articulating processes, or slightly elevated discs, on which the upper bone rests, and upon which the half rotatory and bending motion of the bones of the column perform their actions.



A DORSAL VERTEBRA.

a. The body of the bone. *b*. The ring or opening which assists in forming the sheath for the spinal marrow. *c*. The spinous process. *d*, *d*. The transverse processes. *e*. The articulating processes, by which one vertebra rests and plays on the other.

Owing to the powerful ligaments which connect the whole series together, the dorsal vertebræ are very rarely dislocated. They are, however, subject to disease,—to inflammation, softening, and *caries*. See VERTEBRÆ.

DOSE.—The quantity of medicine given at any one time to an adult person. The doses of some medicines require to be increased in strength according to the frequency with which they are given; others, again, require to be reduced; while some drugs, which have a tendency to accumulate in the system, as arsenic, nightshade, colchicum, &c., are to be given in very small doses at first, gradually augmented up to a definite quantity, and after a few days' rest recommenced in the same progressive manner. The dose for children must, like that for adults, be proportioned according to their strength and sex. Of some drugs children can bear a larger dose, in proportion, than persons of mature years. Calomel is one of these, but with narcotics, especially opium, this rule is reversed, and great care must be taken in administering such medicines
patients of tender age. Females,
general rule, require about a third
than males. Castor oil is an article wh
requires a diminished quantity for a sec
and third dose.

The proportion for an adult male is
ounce; for a female, 6 drachms; the sa
amount for the second dose for a m
and half an ounce for a woman, wh
repeated. The dose of each article will
found under the name of the drug.

DOUCHE.—The name of a French
aspersion bath, now generally introdu
by the hydropathic physicians into th
country. For an account of the dou
see BATH.

DOVER'S POWDER.—This is one
the most useful preparations in the Ph
macopœia, and was originally a physician
nostrum. Dover's powder, or the com
pound ipecacuanha powder, is compos
of 1 part of ipecacuanha, 1 part of po
dered opium, and 8 parts of the sulph
of potass. The dose is 10 grains, wh
contains 1 grain of opium. As a diaph
retic, diuretic, and sedative, this pow
either alone in gruel, or combined w
carbonate of ammonia and camphor wa
will be found a valuable remedy
rheumatism, asthma, and in cases of sev
cold. Indeed, whenever an effective act
on the skin is required, *ten grains*
Dover's powder taken at bedtime, in
small quantity of gruel, assisted
plunging the feet in hot water, and tak
a good draught of egg flip, or spi
gruel, half an hour after, will be certain
effect it.

DRAGON'S BLOOD.—The *Pteroca*
pus Draco; the name of an Indian pl
from which a red-coloured resinous ex
tion is obtained, formerly esteemed as
astringent, but now only used as a colo
ing ingredient for tooth-powders. D
gon's blood is usually obtained in the fo
of a dull, reddish-brown powder, and
cases of spongy gums, or scorbutic af
tions of the mouth, will be found a g
substitute for the Armenian bole, usu
employed to give quantity and colour
tooth-powders.

DRASTIC.—A name given to such
dicines as act speedily and powerfull
especially upon the bowels. The
potent of such drugs are—croton oil,
which 2 drops form an excessive d
elaterium, of which the dose is from [illegible] to
of a grain; and colocynth, of which
grains makes an effective quantity. Ma
drugs which in themselves only rank

atives or purgatives, may be made drastic by their combination with some other article; thus, 10 grains of jalap and 3 grains of gamboge, or ½ an ounce of Epsom salts and ½ a grain of tartar emetic, become drastic purgatives.

DRAUGHT.—By this term is implied a certain amount of liquid medicine to be taken at one time as a dose, and when prescribed separately, is a small mixture consisting of one ounce and a half, or about two-thirds of a wineglass, or, in other words, three full-sized tablespoonfuls. A black draught is an infusion of senna, ginger, and coriander seeds, with Epsom salts.

DREAMS.—This is a subject that can only be treated of in reference to sleep, under which head it will be found. See Sleep.

DRESS.—The title of this article may to some persons seem out of place in a strictly medical work; but in a prophylactic light, and as a means to prevent or ward off disease, it is eminently applicable. It is not, however, our intention to enter deeply into this subject, or, indeed, do more than give a few general directions as to the clothing or the dress of children; what we may have to say with regard to their mothers will be still more general.

In a variable climate such as we are subject to in this country, the mother cannot begin too early to attend to the genial warmth and comfort of her infant's clothing. The foolish and dangerous practice that came into vogue with the no-[illegible] fashion, of leaving infants' heads uncovered, we hope, for the credit, humanity, and good sense of our countrywomen, has had its day, and is going out; for a more pernicious, and, as far as the health of the individual is concerned, dangerous system, was never practised.

This is not the place to argue the question of a covering for the head; but surely the example of five thousand years among all civilized nations ought to be a sufficient authority for mothers who wish to bring up their children in the established rules of health and strength. The attempt to rear children born in a populous city, or under all the conditions of a high state of civilization, like the infants of a Redskin, with the idea of making them hardy, is not only absurd, but mischievous; for the hurtful example of one mother leads to the practice of many.

Setting aside the unsightly appearance an infant makes with its uncovered head, on which nature has not yet placed the clothing of hair, it is actually injurious to expose the half-revealed brain of an infant to the perpetual vicissitudes of our climate. Surely the wise and stalwart men which England has produced within the last eight hundred years is a sufficient proof that the legitimate fashion of caps—whether made of flannel or muslin—cannot have been hurtful to the intellect or frame of their wearers.

Next to the head, which it is a mother's duty to cover, but without oppressing, the feet and the stomach of her child should form the chief objects of her solicitude. This is a precautionary care which will demand the parent's attention from the earliest stage of life, or till the adult has the discretion to guard himself from the assaults of damp and cold. The importance of keeping the stomach well protected, particularly in wet and windy weather, cannot be too much insisted on. If the feet are well covered by woollen socks and thick shoes, the stomach and chest enveloped by warm, close-fitting clothes, and the head lightly covered, all other parts of the body may be safely left to wind and weather;—not that we would advise weak, rickety, or delicate children to have any portion of their bodies exposed to the atmosphere. Such children (and the great number of bowed-legged boys and girls to be seen on holiday occasions in our streets, shows how prevalent is this form of debility among the working classes) should have their thin, delicate limbs most carefully protected from the cold, and the circulation by every means *stimulated* to, not *repelled*, by cold, from their emaciated members. Yet how often do we see such puny children, with limbs hardly larger in circumference than walking sticks, with exposed legs, bare arms, and such limited latitude of skirts, that they hardly suffice for decency, and are totally incapable of supplying warmth! If the motive that induced this species of gossamer costume was based on any valid principle, we could forgive the parental vanity so often conspicuous in the fanciful garb of the child; but as no infant of civilized parents was ever benefited or made strong by the domestic *régime* of a savage, we must strongly condemn a course that can only tend to swell the bills of mortality.

As regards women, it may be said of females in general, that they are *not* sufficiently dressed—particularly young and unmarried females,—safety and comfort being too often sacrificed to fashion, taste, or appearance. It is after coming from heated theatres, ball-rooms, and such places, that women are so remiss in taking that precaution to guard the lungs by a veil, and the chest by a shawl, so absolutely necessary. The observation we have made about the head, feet, stomach, and chest of children, should be attended to as rigorously by females at all periods of life from 17 to 50.

DRINKS.—Any liquid substances, warm or cold, taken to quench thirst, as a diluent, a beverage, or as a potation. Though water is the natural beverage of mankind, and the article to which, in sickness, wounds, and suffering, all turn with eager yearning, yet, in health and strength, how few out of the millions in civilized life resort to it for comfort or refreshment. The unsophisticated beverage is wantonly rejected, and that fluid which assimilates with the blood, and carries to the system many of the most important principles, is repudiated for hurtful and adulterated liquids, which, if they do not always engender disease, in almost every case increase the illness, and seriously derange the vital functions.

Such drinks as are employed for stimulating purposes, whether made with wine, spirits, or malt liquors, not strictly used as medicinal agents, will be found under the article Potations, which see. The remaining we shall divide into Beverages and Drinks. Of the first of these, such as tea, coffee, chocolate, and cocoa, each is so intimately connected with the dietetic system of every-day life, and their mode of preparation and qualities are so intimately known to all, that it is quite unnecessary to take up any space in this work with observations on their use and properties, more particularly as all that is needed to be known on either point will be explained under Food.

The class of drinks form a most important subject in medical practice, and are not simply adjuncts to medicine, but in all cases *important agents*, and in many, absolute *remedies*. Medicinal drinks are divided into those prepared by boiling, and those obtained by infusion. Diluents, obtained by boiling, or, as they were anciently called, *ptisans*, are by far the most numerous and useful, as some of them are not only simply watery beverages, meant to allay heat and quench the thirst, but may be made both to abate fever and supply the system with more or less of nutriment.

Drinks supplying a portion of nourish*ment* are such as those made by boiling a few spoonfuls of pearl barley, and a small piece of orange peel, with a litt sugar, in three or four pints of water f about half an hour, straining the liqu and, when cold, giving from half a cup t half a tumblerful as often as required.' Oatmeal, rice, sago, semolina, grits, o flour, may be used for the same purpo except that the powdered substances a to be first mixed into a thin paste wi cold water, and made like gruel by pouri the mixed ingredient into the wa boiling and constantly stirring the mi ture for the few minutes requisite to co it sufficiently. A little lemon or ora peel may be boiled with the water in a case, according to taste; or when an a drink is required, one or more oranges lemons may be cut up in slices and bo with the ingredient used.

Gruel, whether made with flour, o meal, or barley grits, either al sweetened and flavoured, or made me cinal by means of acids, comes equ under the denomination of ptisans, drinks. The consistency or thickness each drink must be proportioned to disease for which it is given. Wh simple barley water, without flavour sweetness, is required, as in cases of fe or hemorrhage of blood from the lung stomach, the drink may be made perfe medicinal by adding about half a dra of powdered nitre to each pint for first class of disease, and by the addi of one and a half drachms of the elixir vitriol, or of half a drachm of dil nitric acid, to each pint of the barley w for the latter.

Sometimes the drinks are purely me cinal, as in the decoction of marsh-mallo dandelion, woody nightshade or dulcam broom, and some others. In these ca the roots are washed, cut small, put o cold water, and boiled for a sufficient to extract their virtues.

Among the articles chiefly used drinks made by infusion are hyssop, b mint, pennyroyal, sage, fennel, wormw rue, camomiles, and many others. As object in giving drinks of this natu both to quench thirst and allay heat, slight action on the skin, and at the s time leave a grateful aromatic taste in patient's mouth, care must be taken to make the infusion too strong by ad too much. With balm, mint, and pe royal, a handful of the leaves and sprig the plant may be used to the pint of w as sufficient; but with most of the ot a *few leaves* will be found enough to g effect and taste to a pint of water, which in all such cases is to be poured on the plant boiling, and the jug covered and placed beside the fire for three or four hours. If a stronger action on the skin is required than the drink is likely to produce, a scruple of powdered nitre may be added to every pint of the infusion.

Water, so frequently and earnestly craved for by the patient, should never be refused, though care should be taken to have it first boiled, and then set aside, that all impurities may subside. If this precaution is taken, all the advantages obtained from distilled water will be secured, and a wholesome beverage procured for the invalid, which, by the addition of a little syrup of orange, or capillaire, the expressed juice of blackberries or currants, may be converted into a grateful, aromatic, and cooling drink.

The French are in the habit of using wormwood, and other stomachic cordials, mixed with water, as an ordinary summer drink.

As fever drinks, the most generally used articles, after the effervescing draughts, are those known as seidlitz and soda powders, soda water, lemonade, and several artificial and mineral waters charged with carbonic acid. After these come whey, buttermilk, and toast and water. The best method of preparing this oft-coveted beverage is to toast two or more pieces of thin bread, care being taken that no part is singed, but each side browned of one uniform colour; they are then to be immersed in a jug of boiling water, and covered over till cold, when it should be strained into a decanter, or some closed vessel, so that the aroma, in which resides much of the beauty of the drink, may not be lost by exposure to the air. As a cooling fever drink, and one that acts beneficially on the skin, cream of tartar and water deserves a foremost place; but as a larger quantity of this salt is dissolved by hot than by cold water, it should always be made by pouring boiling water on the tartar, and stirring it well till cool. Any quantity of this drink may be taken without fear.

Next to cream of tartar as a drink, is the liquid made by mashing up boiling water and tamarinds, or, if preferred, by using thin gruel or barley water, and, when cold and thoroughly mixed, straining it off, when it makes a nourishing and subacid drink.

In Portugal there is a famous alterative medicine, and greatly in vogue on the Continent as a prophylactic remedy, called, from the place where first made, the Lisbon diet drink. This,—in other words the compound decoction of sarsaparilla,—though a medicine of value, has no right in such a place as this, but from the circumstance of its name. See SARSAPARILLA.

DROPS.—A division of liquid measure, sixty drops being equal to one fluid drachm. As drops vary in bulk, and consequently in strength, according to the nature of the fluid, when dropped from the mouth of a bottle, it is customary to measure the number of drops ordered, when they are called *minims*. See APOTHECARIES' MEASURES.

DROPSY.—The name of a very important, but by no means unfrequent, class of diseases, affecting persons of all ages and of either sex. Dropsy is either a substantive disease, or a concomitant of, or sequel to, some other disease; thus, it may arise, after preliminary symptoms, as a definite disorder, or it may only follow in the train of some entirely different disease, as when it occurs after scarlet fever, or some prostrating malady.

All dropsies are divided into those which are general and those which are local, or are confined to certain localities.

Dropsies were supposed to result from some diseased action in the absorbents, by which the serous or watery part of the blood, instead of being carried to its proper reservoirs and destinations by the lymphatics, is deposited in foreign situations. Though probably dropsy is caused by some defect in the healthy action of the lymphatics and veins, there is no doubt that the primary cause of such disease proceeds from an impoverished state of the blood, a diseased liver, and an organic affection of the kidneys, and not unfrequently from Bright's disease.

GENERAL DROPSY.—*Anasarca*, or dropsy of the flesh, as it is sometimes called, is an effusion of water into the cellular tissue beneath the skin and between the muscles, causing a partial or an entire distension of the whole body.

The *Causes* of this form of the disease are—an hereditary tendency; a phlegmatic temperament, shown by a bloated countenance, and a loose, flabby state of the flesh; or whatever has greatly lowered the tone of the system and vitiated the blood.

Symptoms.—These commence with a swelling of the feet and ankles towards evening; this puffiness gradually ascends up the legs to the knee; the swelling then shows itself in the hands, and having spread to the arms, returns to the knee, and, advancing upwards, reaches the abdomen. The swelling now recommences at the arms, and descends downwards over the chest, as the distension ascends upwards over the belly to meet it.

There is much thirst, heat, and oppression felt; the water is high coloured, hot, and scanty, and loaded with a reddish precipitate. As the skin is more distended it becomes tense and shiny, is damp and cold, leaves deep pits when pressed, and often shows traces of exuding water; the cuticle sometimes rises into blisters; the countenance is sallow, the skin white, and there is drowsiness, torpor, and often an oppressed cough.

In all dropsies the accumulation is always greatest in the most dependent parts: so, in anasarca, the swelling or *œdema* is always most considerable in the legs and feet.

Treatment.—There are two objects to be obtained in the treatment of this disease — 1st, to discharge the effused water; and, 2nd, to prevent its reproduction by bracing the system. In the first of these, some medical men scarify, puncture, or blister the skin,—a practice which, from the injury to the texture of the skin from distension, and its lost temperature, is very prone to result in the formation of tedious and troublesome sores. When anasarca arises from an inflammatory state of the system, or from salivation, it will be necessary to commence the treatment by bleeding, giving purgatives, and a low diet; but when from any other cause, the strength must be supported, while, by means of cathartics, diuretics, and diaphoretics, a steady action is being maintained on the bowels, kidneys, and the skin, at the same time the absorbents are to be stimulated to carry off the water by friction on the body. The first of these effects will be obtained by either of the following purgative pills or powders.

Purgative Pills.—Take of—

Barbadoes aloes (powdered)	12 grains.
Colocynth powder . .	12 grains.
Gamboge powder . .	12 grains.
Calomel	12 grains.
Ginger powder . . .	10 grains.
Castile soap	10 grains.

Mix thoroughly, and make into a mass, and divide into twelve pills; one to be taken every four, six, or eight hours, as required.

Purgative Powders.—Take of—

Powdered jalap . . .	1 drachm.
Tartar emetic	3 grains.
Scammony powder . .	½ drachm.
Sulphate of potass . .	2 drachms.
Aromatic powder . .	24 grains.

Mix well, and distribute into twelve powders; one powder to be given twice, or, if necessary, three times a day.

As diuretics, or medicines to promote the discharge of water, either the following pills and mixture, or powders and mixture, are to be taken concurrently with the purgative medicines ordered above.

Diuretic Pills.—Take of—

Powdered camphor . .	12 grains.
Powdered antimonialis	15 grains.

Mix, and add—

Compound squill pill .	1 drachm.
Oil of juniper	6 drops.

Mix intimately, and divide into twenty pills; one of these pills to be taken every three hours, till they begin to operate on the bladder, when they are to be given one every six hours.

Diuretic Powders.—Take of—

Powdered nitre . . .	48 grains.
Powdered ipecacuanha	10 grains.
Powdered antimonialis	12 grains.
Powdered squills, and powdered digitales, of each	6 grains.

Mix, and divide into twelve powders; one to be given in a little mint water every six hours as a substitute for the diuretic pills.

Diuretic Mixture.—Take of—

Fresh broom sprigs .	a handful.
Juniper berries (bruised)	1 ounce.
Water (cold)	1½ pints.

Boil slowly for about 12 or 15 minutes. Strain. To 7 ounces of this decoction, when cold, add—

Powdered nitre . . .	1 drachm.
Spirits of sweet nitre .	3 drachms.
Spirits of juniper . .	6 drachms.
Tincture of colchicum .	2 drachms.

Mix: two tablespoonfuls to be taken at the commencement, and one tablespoonful every two hours after, till the amount of water is increased, when the frequency of the dose may be reduced. In cases attended with much cough, oppression, and pain, the following mixture may be substituted with advantage for the one just prescribed. Take of—

Powdered opium, and powderedipecacuanha, of each	4 grains.
Decoction of broom and juniper, as above . .	7½ ounces.
Acetate of potass . .	3 drachms.

Mix carefully in a mortar the two powders and the acetate, adding by small quantities the decoction; then add—

Spirits of juniper . . ½ ounce.

Mix: two tablespoonfuls to be taken every four hours.

To produce the diaphoretic action on the skin, or sweating, the first means adopted should be the employment of the warm or vapour bath; frequent draughts during the day of lukewarm mint tea, or of an infusion made by pouring a quart of boiling water on a handful of mint leaves and the same quantity of juniper berries, allowed to stand covered till tepid, when it is to be strained and used as the other, as an occasional drink, but taken slightly warm.

In addition to these means, when the skin is dry and chilly to the feel, and the rest disturbed, 10 grains of Dover's powder are to be taken at bedtime, accompanied by some warm gruel, and bottles of water to the feet. It is, however, in the fourth and last means of removing the water, to which, after diuretics, we attach the greatest importance, and must request, on the part of the patient or friends, the most unflagging attention; we refer to friction.

The beneficial effects of friction over the body, in stimulating the absorbents, is too well known to need recapitulation; and when to that action a strong stimulus is added, in the form of a drug that has a direct operation on the kidneys and bladder, the result is of the most gratifying description; that drug is camphor, and the preparation camphorated oil (common sweet or olive oil, in an ounce of which from 1 to 2 drachms of camphor, cut small, is dissolved). Though rubbing with the hand alone, or with the interposition of a little common lard or oil, is always certain to cause a reduction in the amount of the water, yet the effect with the camphor will be infinitely more satisfactory. It is perfectly immaterial at what part the friction commences so that it is persistently continued; the fingers being every few minutes dipped in the preparation, and, by a steady but not rapid up and down sweep of the hand, diffused over and rubbed into the part. When the anasarca is general, each member should be rubbed at a certain time, and for about ten minutes on each occasion; a flannel roller should then be passed round the limb or part, and another member then or subsequently treated in the same manner. Some practitioners are in the habit of firmly bandaging the several parts of the body in this disease, so as to effect absorption by pressure; but the theory will not stand a justification, and, as there is danger of forcing the water from the surface to the central organs, it should never be followed by a non-professional.

When the effused water has been expelled, the system must be restored as quickly as possible to such a state of health as shall enable it to resist such morbid predispositions, and repel the enemy when it next assaults the constitution. For these purposes a good nutritious diet, exercise, cold bathings, or daily spongings of the body, friction with a towel or flesh-brush, early hours, and regular habits, are imperatively necessary.

The medical part of the treatment in this stage of the case must depend greatly on what was the previous exciting cause: if caused by the liver, the kidneys, or from habits of dissipation, the true state of the case must be revealed by a careful noting of the symptoms, and the remedies proper to the organ or the cause applied. In general, however, a course of iron or quinine—the vegetable and the mineral tonics—must be adopted, with iodine, hydriodate of potass, and stomachics and alteratives, as the case may be. Decoctions of dandelion and sassafras, or of compound decoction of sarsaparilla, with nitric acid or the tincture of the muriate of iron, taken three or four times a day, will be found among the best of the alterative tonics. The skin must be kept of a sufficient warmth, and care taken that nothing presses unduly, or for any length of time, on one swollen place, as, from the weak vitality in the structure, there is great danger of sloughing.

When the skin swells so as to have the appearance of bursting, it may become necessary to puncture the most dependent parts with fine needles, and allow the water to drain off from the few punctures, but not otherwise.

Dropsy of the Belly, or *Ascites*, is the next form of this disease that, on account of its frequency, demands attention. The characteristics of this, and the subsequent dropsies, from the previous disease of the same class, lie in the fact that the water in the former is contained in the cells of the adipose tissue, while in most of the others it is collected in the investing membrane of the cavity that contains it.

Dropsy of the belly, or *ascites*, has also another peculiarity, viz., in not coming on after any great constitutional disturbance or disorganization of the system, but approaching with a gradual and almost imperceptible advance, neither undermining the strength of the patient, interfering with his appetite, nor, till the accumulation becomes so large as to press on or incommode the adjacent organs, producing any inconvenience.

Symptoms.—Gradual enlargement and distension of the abdomen, which, after a time, produces a slight oppression of the chest, with cough, particularly when in the horizontal position; the same cause, that of pressure, retards the action of the bowels, producing costiveness, a diminished supply of urine, and a hot, dry skin.

The swelling, at first in the lower part of the belly, in time ascends higher, and eventually covers the whole abdomen, the belly, when struck with the fingers, emitting a dull, gurgling sound. With the further advance of the disease, the face becomes pale, hollow, and anxious, and often bloated; there is great thirst; the water is thick, high coloured, and scanty, throwing down a brick-coloured sediment; the pulse, during the greater part of the disease, being either unnaturally slow and languid, or quick and small.

The *causes* of this disease are those generally which induce dropsies, as already stated, or any cause that may, in certain states of the constitution, produce distension of the abdomen, as in pregnancy; on this account women are much more likely to be attacked with this disease than men.

Treatment.—When dropsy of the belly, as it sometimes does, arises from inflammatory action, or when, from injury received, there is any indication of such a state existing; the warm bath, with general and local bleeding, and the employment of calomel and opium every three or four hours, must be rigidly adopted. In general cases, however, there is no necessity for such active and depressing remedies. Saline purgatives, such as the following, either of which may be taken, or all of them in succession, will be found sufficient, assisted by the *diuretic pills* prescribed in the previous form of dropsy, one being taken between each dose of either of the mixtures. Take of—

Phosphate of soda . .	1 ounce.
Tartrate of potass and soda, of each . . .	1 ounce.
Water (cold)	10 ounces.

Mix and dissolve. Take three tablespoonfuls every six hours.

Take of—

Epsom salts	1½ ounces.
Carbonate of magnesia	2 drachms.
Tartar emetic . . .	2 grains.
Cold water	10 ounces.

Mix. Take two tablespoonfuls every four hours. Take of—

Acetate of potass . .	3 drachms.
Carbonate of potass .	4 drachms.
Cold water	9½ ounces.

Dissolve, and add—

Nitre, powdered . . .	1 drachm.
Spirits of juniper . .	½ ounce.

Mix. Take two tablespoonfuls every three or four hours; and one of the diuretic pills an hour before or after each dose of the mixtures.

The camphorated oil prescribed in *anasarca* is to be employed three or four times a day, on each occasion being rubbed into the belly with a steady and resolute persistency. When the abdomen is much distended, a bandage, such as is applied to women after confinement, must be adjusted round the body as a support, and only slackened at such times as the camphorated oil is being employed. As a drink to quench the thirst of the patient, and also to act as an assistant medicine, two or three quarts of dandelion tea—made by boiling a few ounces of the cut roots of the plant, with a little mint to flavour it, and an ounce of liquorice root, in four quarts of water down to three—are to be prepared, and half a tumbler of this, when cold and strained, given every few hours.

At the same time as a change in the drink, a quantity of barley water should be made, with a drachm of powdered nitre added to each quart, and, if preferred, the juice of an orange or lemon; a wine-glassful of this beverage being taken every three or four hours.

When the bowels are obstinate, or only act insufficiently, it will be necessary to produce a few copious actions by means of the following pills. Take of—

Powdered aloes . . .	24 grains.
Gamboge	12 grains.
Jalap powder . . .	24 grains.
Croton oil	3 drops.

Mix, and add—

Extract of henbane, enough to make into a mass.

Divide into twelve pills, two of which are to be taken night and morning, when required, but discontinued when the effect for which they are given has been obtained.

great dependence in this form of must be placed in acting on the s by means of the diuretic pills, the d friction with the camphorated l by the frequent use of one or f the drinks prescribed.

n, however, the disease, in opposi- all remedies, still advances, and tension becomes so great that it ly interferes with the respiration, e must be had to the surgeon, and btained by drawing off the water operation of Tapping, which see.

PSY OF THE CHEST. *Hydro-* —This disease, sometimes called on the chest, is, like the last, an d dropsy, the fluid being contained lining membrane of the thorax— *ura*—and may be present either on ht side or the left, or on both.

cause of this disease is generally rganic affection of the heart, a ted state of the lungs, or arises n inflammation of the lining mem- tself—the pleura.

ptoms.—The first and most con- ymptom is a difficulty of breathing, panied with great tightness and sion at the chest, increased by the xertion, and particularly distressing ht approaches, and when the body e horizontal position. The counte- is pale, with a blue or purple mark the eyes, or round the mouth; the become full and puffed; the feet d, and the legs swell; the urine is and high-coloured; the pulse is nd irregular; the appetite becomes ed, and there is great thirst. As sease advances, there is general of the body, the patient can only one side, and when both sides are d, he can rest on neither, and finally ged to be supported in bed by . Cough, palpitation, and alarming disturb the patient by night, g him to burst from his bed and the window for air and ease.

PSY OF THE BRAIN. *Hydroce-* . See WATER ON THE HEAD.

PSY OF THE WOMB, as this affection roperly called, or Ovarian Dropsy, sease confined, of course, to females, a general rule, to those who have l forty years of age, or who have ed unmarried, or never had child- though there are cases in which it young females before their twen- ear.

seat of this disease is near one er of the Fallopian tubes, and consists of an enlargement of one of the *ovaries.*

Symptoms.—These resemble, in a great measure, the characteristics of ascites, or dropsy of the belly, with some of the features of pregnancy. The principal peculiarity, however, is that there is no previous constitutional derangement, the first symptoms commencing with a swelling in one or other of the groins, and without pain or inconvenience slowly enlarging, till finally the whole abdomen is distended as in pregnancy, and by the pressure from the front on the bowels, and downwards on the bladder, producing great constipation in the one, and a frequent desire to empty the other. Eventually, loss of appetite, pain, and general constitutional disturbance intervene, and the patient is reduced to great emaciation in every part but the abdomen.

Ovarian dropsy is easily distinguished from pregnancy by the length of time the disease has existed, by the areola round the nipple, and other symptoms of gestation, by the absence of the head of the child when the hand is laid on the abdomen, by the sound by percussion, and always by the stethoscope; and it is distinguished from ascites by the health remaining good in ovarian dropsy for a long time, by the slow advance of the disease, and the irregularity of the tumefaction of the abdomen, while in dropsy of the belly the distention is universally even.

The *treatment* of this disease is, of all forms of dropsy, the most difficult and disheartening; in the failure of finding remedies to relieve its ravages, surgeons have resorted to the knife, and, by an operation similar to the Cæsarian section, have fairly removed by excision the diseased mass; but though the first surgeons in Great Britain and on the Continent have performed this operation with despatch, feeling, and judgment, every case believed to be a true ovarian dropsy, proved, after operating, fatal; while among less gifted surgeons, the operation has been little less than professional butchery and murder.

The remedies laid down to be employed in dropsies of the skin and belly are the only means that offer any chance of benefit, especially the friction with electricity; but as the disease is seldom attended with acute pain, and as it is the moral and domestic annoyances of such a disease, more than its physical evils, that are distressing, they had better be patiently endured than under any circumstances sacrifice a life in the absolute delusion of obtaining a benefit.

DROWNING.—Both in summer and winter, on sea and land, there is no accident to which society at large, especially the male portion, is more frequently subject to than drowning.

In a maritime nation like ours, it is a reproach to the government of the country that the art of swimming, and the means by which to preserve our own lives and save those of others, is not made a branch of national education: even with our mariners, whose duties hourly expose them to all the dangers of sea and ocean, it is notorious that not one in seven knows how to keep his head above water. When we come to the article Swimming, we shall have occasion to show how difficult it is for a man to be drowned, if he will only keep quiet, and endeavour to free his mind from the paralyzing effect of fear.

When a man falls from a height into the water, there is so much air in his clothes and in his inflated lungs, that if the water be deep he is certain to rebound again to the surface, the denser body of water beneath acting as a buffer, and increasing the recoil. It is only in rivers or shallower water that the danger exists that the body may not again mount to the surface; for if the man fall with much momentum, he may be stunned by concussion with the gravelly bed; or if slimy, sink deep into the oozy bottom, where, of course, he perishes: more frequently, however, the body comes up bent or doubled, the back to the surface and the head downwards. For the better understanding of the treatment of this kind of accident, it will be needful to explain the *cause of death by drowning.*

Complete death seldom takes place in the water under half an hour; up to that time the case, though seemingly fatal, is only one of *suspended animation*, or the disease to which we have already frequently referred, called *asphyxia.*

As long as irritability, which is the proximate principle of life, exists in the organs of the body, absolute death has not set in. The lungs are the first set of organs which cease to act; the blood, in consequence of their cessation, no longer obtaining oxygen to bring back and stimulate the heart, returns to that organ in its venous or impure state, and as effectually stops its action, after a few languid efforts to carry on its function, as if it had been grasped into stillness; at the same time the head becomes loaded with venous blood, and a species of apoplexy arrests the nervous function of the brain, and the condition called asphyxia, or suspended animation, is fully established. The other organs, being less important, succumb after the heart; but though all of these have lost their active vitality, the inherent irritability is still in force in each, and will continue in abeyance for a considerable time after the stoppage of the heart and lungs.

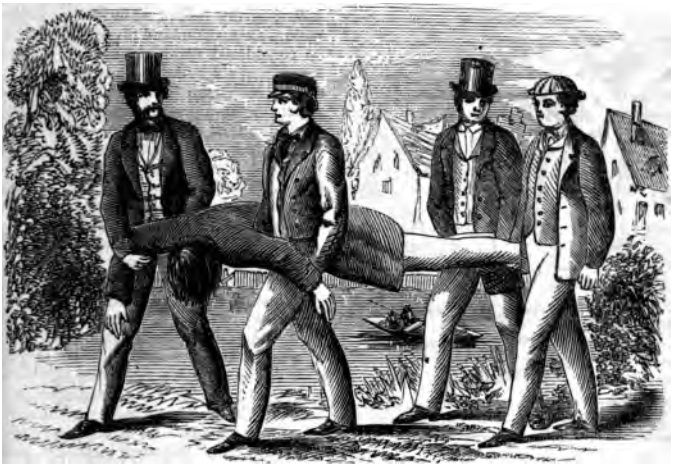
The idea that a drowning man swallows water, and can only die when the body is full of liquid, is an ignorance now entertained by a very few; the belief, however, often leads to cruel, if not fatal mistakes in the mode of practice, that to be avoided cannot be too extensively known.

Everybody is conscious of the pain and trouble produced in swallowing, should a grain of food or particle of fluid get on the *glottis*, or entrance into the windpipe, or what is familiarly called "go the wrong way." This extreme sensitiveness and resistance of the part to the approach of anything but air shows how impossible it is for water to enter the windpipe without such convulsions of the body as would show what was taking place. The moment, indeed, such a danger presents itself, the *epiglottis* (see DIGESTION, *cut* 2) instantly closes, and while the danger threatens, with a death-lock keeps the valve firmly down; at the same time a constriction of the gullet takes place, and the access of water to the stomach is in the same manner, but not so firmly, diverted from that organ.

The man immersed in water consequently dies from the interruption of air into the lungs, and the presence, as a consequence, of venous blood in the heart. The Chinese mandarin, when to escape the public executioner he commits suicide, and places a lump of gold in his throat, or swallows his tongue, dies exactly similar; either the metal or the point of his tongue presses down the epiglottis, and so produces, first asphyxia, and secondly death.

TREATMENT.—The moment the body has been recovered—indeed, while it is being sought for—a message should be sent to the nearest public-house or private residence, to prepare hot water, a warm bed, and a number of bottles and tiles, the latter to be placed under the fire to become heated, and to have in readiness towels, spirits, and such articles as may be needed, with, if possible, an electrical apparatus As soon as the body is taken to the shore or placed in a boat, the mouth is to b opened, the tongue *instantly* pulled forward; this action lifting up the epiglottis, and opening the air-passages. The froth and phlegm is next to be wiped out of the mouth and fauces, the body briskly wiped, a sheet thrown over it, and carried by four men with the face downwards, and at a quick step, to the nearest house. See *cut*.

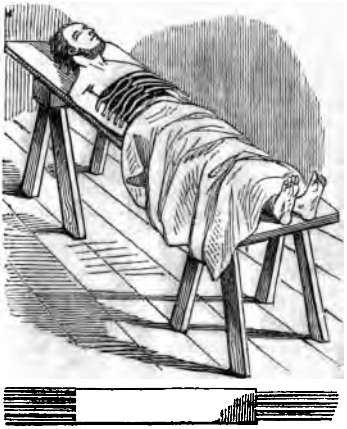
The object of this attitude is, that it insures the keeping open of the epiglottis and the uninterrupted entrance of air into the lungs, and a more easy expansion of the chest.



CARRYING THE BODY.

A long shutter, supported on the backs of chairs, or tressels, is always more convenient than a bed for performing the necessary operations in all serious cases. Such a contrivance should be placed in the middle of the room, before a large fire; a series of heated tiles placed along on the centre of the shutter; over these a blanket is to be laid, and the body deposited upon this in such a manner that the spine may rest on the tiles; bottles of water are to be placed under the arms, in the groins, and at the feet; the head is to be slightly raised by a pillow, the body rapidly rubbed dry, and then a warm blanket flung over the whole person. The mouth and nostrils, if necessary, are to be again cleansed, and the tongue pulled forward, and then artificial pressure, the sheet-anchor of hope, at once commenced. The first step in the operation is for one person to press the ribs on both sides, while at the same moment another compresses the abdomen, so that simultaneously the action of expiration may be performed; the hands are then to be removed, and the natural elasticity of the parts allowed to expand the chest; after a momentary rest, the same operation is to be repeated in such rapidity that twenty-five expansions and expulsions may be effected in a minute. To facilitate this operation, and insure an equal compression, the following bandage will be found eminently useful.

Procure a strip of linen or flannel, two yards long and half a yard broad; cut each end into six strips, three inches wide and two feet long; pass the middle of the bandage smoothly under the body, so as to take in the lower ribs and part of the abdomen; the cut ends are then to be brought forward across the front of the body, and the strips made to interlace, the left passing to the right side and the right to the left, like the interlocking of the fingers of the hand. While one assistant grasps the strips on one side, another does the same to those of the opposite, and, steadily pulling together, effect a general and uniform pressure. At the instant they relax, the surgeon, closing the mouth, and inserting the pipe of a small pair of bellows into one of the nostrils, inflates the lungs, taking off his hand from the mouth as the others again with the bandage expel the air from the chest; this process being repeated with steady perseverance as long as any hope remains of restoring animation. While these operations are going on at the chest, others should rub the rest of the body, particularly the legs and arms, with warm, dry flannels, the bare hand, or spirits. When these united efforts have been carried on for some hours, or as soon as the apparatus is ready, the effect of electricity should be employed; the body isolated by resting on glass bottles, and shocks of electricity passed along the spine, and eventually through the heart and lungs. As soon as may seem expedient, an injection of warm gruel, brandy, and turpentine should be thrown up the *rectum*, not in small quantity, but sufficient to distend the bowels and produce visceral heat.



RESUSCITATING BANDAGE FOR ARTIFICIAL RESPIRATION.

When reaction sets in, and the application of ammonia to the nose causes a convulsive tremor, the power of swallowing will probably have returned, and a few spoonfuls of brandy and water may be poured down the throat, and restoratives carefully employed.

OBSERVATIONS.—The savage system once in vogue of hanging a man up by the heels, shaking him till his teeth were broken under the concussion of his jaws, and rolling his body over a barrel, in the *attempt to get* the imaginary water out of the lungs and stomach, it is to be hoped will never be tolerated again by any one deserving a reputation for common sense.

Though an immersion of a minute and a half *has* proved fatal, if the body can be recovered before the expiration of two hours, every effort should be made to restore animation, and no exertions should be considered complete unless carried on for at least six hours. In every case, when a hot bath can be procured, the body should be immersed, and the first friction carried on in the bath. Care must be taken that the bottles and tiles used are not too hot; and in every case, as much of the manipulations should be performed under the blanket or covering of the body as possible. See HANGING.

DROWSINESS.—A disposition to fall asleep; a state of the system in youth and middle age indicative of a full state of body, an active digestion, or a condition approaching congestion; while in advanced life and plethoric persons it is characteristic of apoplexy. In any case drowsiness is only a symptom, but in the young and plethoric it demands attention, and should be immediately counteracted by proper means. In aged persons it is more a sign of physical torpidity, and is generally a matter of little importance.

DRUGS.—All articles used for medicinal purposes are denominated drugs, though the term should, perhaps, be strictly confined to what are called simples, balsams, gums, resins, and exotic products used as medicaments in a dry state. The manner in which drugs are adulterated is one of the most disgraceful facts connected with the modern vice of adulteration, for the practice is carried to so frightful an extent, that many of the most important drugs are sophisticated to such a degree that not 15 per cent. of the article used is genuine; and when this occurs in an important drug, such as opium—when the saving of a life may depend upon the proper action of the dose given—the consequences are of the most serious character. The articles most frequently adulterated are the high-priced drugs, such as opium, quinine, musk, castor oil, all the essential oils, benzoic acid, alcohol; indeed, so universal is the system, that even an article such as guaiacum shavings, not worth sixpence a pound, is adulterated to the extent of fifty per cent. with satin and ash-wood shavings.

DRUM OF THE EAR. See EAR, and TYMPANUM.

DRUM BELLY, OR TYMPANITES.

—This is a peculiar disease of the bowels, vulgarly called Wind Dropsy, whose peculiar characteristic is an extraordinary distension of the abdomen, accompanied with excessive flatulence.

Symptoms.—Distension of the belly, caused by the generation of a large amount of gas in the bowels, producing a constant eructation of wind, severe griping, colicky pains about the navel, attended with costiveness, frequent desire to make water, thirst, heat, great emaciation, and, towards night, hectic fever. The appetite is much impaired, while the abdomen becomes so tense, that when struck with the fingers it emits a sound like a beaten drum. The flatulence, though confined to the stomach and the arch of the large intestines, in severe cases passes into the sac of the peritoneum. This disease not unfrequently follows dropsy and gangrene, and may proceed from any cause that induces a loss of tone in the intestinal canal. The absence of fluctuation always distinguishes this disease from dropsy of the belly, the only one with which it can be confounded.

The treatment consists in first expelling the flatulence, and then, by restoring the tone to the alimentary canal, preventing its recurrence.

The first object is to be effected by giving a compound assafœtida pill every four hours, using the camphorated oil as a friction over the abdomen night and morning, as in ascites (see Dropsy of the Belly), applying a broad bandage tightly across the abdomen, and using the following injection for the bowels twice a day. Take of—

Warm gruel . . .	½ pint.
Castor oil	½ ounce.
Turpentine	2 drachms.
Tincture of assafœtida	1 drachm.

Mix, and make an injection. To be thrown up the bowels while warm.

DRUNKENNESS.—The habitual use of ardent spirits, or malt liquors, is the parent of more diseases than ever sprung from rotten fens or Levantine contagions. How many of those organic diseases that form so large a portion of the mortuary list of the present day are to be traced directly to this vice! and how many others have, through the same cause, become hereditary taints, that doubly punish the offender by the suffering he has to witness in his children!

Under Intoxication, we purpose laying down a system of moral conduct by which the diseased action which prompts the vice of drunkenness, or dissipation, may be corrected. For the present, to dispel as quickly as possible the effects of an occasional excess, and enforce on the excited nerves a sudden sobriety, one of the most effectual remedies is a small dose of sal volatile, or volatile salts, in a wineglass of water—such as 20 drops of the former, and 15 grains of the latter—repeating the dose in half an hour. The Scotch are in the habit of taking a basinful of cold broth for the same purpose, and the effect of such a remedy is sometimes very signal. An emetic is, however, the most speedy way of effecting a cure, and following it up by the sal volatile and water half an hour after.

When drunkenness threatens to become dangerous, from the habit of the body of the person, the shirt should be opened at the neck, all clothes that anywhere press on the body should be loosened, the man laid on his back on the floor, with his head raised, bottles of water put to his feet, and vinegar and water applied to his head, and in that position allowed to sleep himself sober; if, however, he be short and stout, with a thick neck, and snores loudly, an emetic of mustard and water, or 30 grains of white vitriol in a cupful of drink, should be given immediately, and, if necessary, mustard applied to the feet: in general, however, the emetic, cold applications to the head, and heat to the feet, will be found sufficient for most cases. See Intoxication.

DRY CUPPING.—Applying the cupping glasses without scarifying the skin. See Cupping.

DUCT.—A term used in anatomy for a vessel or tube leading from one part or organ to another; as the hepatic duct, pancreatic duct, lachrymal duct, and, most important of all, the thoracic duct.

DUCTILITY.—A property inherent in animal fibres,—the power of being drawn out, and the opposite of contractibility. Ductility is also a property of all metals, some—as copper and silver—possessing this property in a greater ratio than others.

DULCAMARA.—The Woody Nightshade, or Bitter-sweet—derived from *dulcis* and *amarus*, the bitter-sweet; botanically known as the *Solanum dulcamara*—belongs to the Natural order *Solanaceæ*.

Medical Uses and Preparations.—It is only the dried stems and twigs of the dulcamara that are used in medicine, and the only form in which they are employed is that of decoction, either alone, or in combination with sassafras, mezereon, dandelion, or sarsaparilla. It is chiefly employed in cutaneous affections, and supposed to act as a diaphoretic, diuretic, and alterative tonic. Though a powder of the plant, and a syrup, are sometimes to be met with, little reliance can be placed on their efficacy.

One-and-a-half ounces of the dulcamara, boiled in two pints of water to one pint, is the ordinary strength used for the decoction; a wineglassful of which every six hours is the usual dose.

The fruit of the woody nightshade, from its tempting appearance, is often eaten by children, and sometimes with fatal results; and, as it contains some narcotic principles, should be expelled from the stomach as soon as possible by an emetic of white vitriol.

DUMBNESS.—An incapacity to speak, the consequence of some organic disease or imperfection in the tongue, palate, or in that part of the brain where the nerves supplying the tongue arise. This calamity is almost always congenital, or born with the person, and combined with deafness; it has sometimes proceeded from a neglect in youth of exercising the powers of speech.

DUODENUM.—The commencement of the small intestines,—that portion commencing at the pyloric extremity of the stomach, and extending for twelve fingers' breadth or inches from that organ.

The duodenum, or small stomach, is one of the most important sections of the alimentary canal, as it receives the chyme from the stomach, and the biliary and pancreatic secretions from the gall-bladder and pancreas, and in its cavity the separation of the chyle takes place. See DIGESTION.

DURA MATER, OR HARD MOTHER.—The external and strongest membrane of the brain. The dura mater is a white, tough, fibrous membrane, that lines the whole internal cavity of the skull, and sends down folds or processes which divide the brain into hemispheres, and part the brain proper from the cerebellum, or small brain, and at the same time form channels or sinuses for the venous blood returning from the organ, and which eventually terminate in the jugular veins. See BRAIN, and MENINGITIS.

DUTCH DROPS.—A nostrum at one time in great demand in this country, and popularly considered a specific in cases of rheumatism, lumbago, and most affections of the kidneys; as well as being esteemed *a capital styptic* for cuts and wounds.

Dutch drops are a rectified spirit, made by distilling purified spirits of turpentine from guaiacum, oil of amber, oil of cloves, and spirits of nitre; the dose is from 30 to 40 drops in water three times a day.

DYES. See HAIR DYES.

DYS.—A Greek word signifying with trouble or difficulty, and added to many medical terms, as the following:—

DYSENTERY.—This disease, so common in hot climates, and by no means unfrequent in this country, is an inflammation of the mucous membrane of the large intestines, and presents in its symptoms almost all the characters of inflammation of the bowels—the same pain and tension of the abdomen, and sickness of the stomach—with these special differences, that there is no constipation in dysentery, but a discharge of bloody, mucous, or muco-purulent matter.

The CAUSES of dysentery are first some remote specific contagion, great moisture suddenly succeeding intense heat, especially in autumn, unwholesome food, hard drinking, and noxious exhalations. The favourable prognosis is when the evacuations become tinged with bile, less frequent in their occurrence, and when a perspiration breaks out on the body; and unfavourable, when, towards the end, vomiting, hiccup, difficulty of swallowing, and convulsions supervene.

TREATMENT.—Whatever may be the type of the fever that attends this disease, the remedies proper to that must be first adopted. If inflammation, bloodletting, cooling saline purgatives, blisters, &c., will be demanded; if typhoid—the most frequent form under which it is encountered,—the supporting treatment proper to that putrescent form of fever must become the practice.

To correct the secretions and carry off the purulent discharge, it will be necessary to give an emetic of 10 grains of ipecacuanha, and 1 grain of tartar emetic, followed, after some hours, by the following mixture. Take of—

Mucilage	2 ounces.
Castor oil	1 ounce.

Mix thoroughly, and add—

Cinnamon water . . .	4 ounces.
Laudanum	1 drachm.
Syrup	1 ounce.

Mix: one tablespoonful to be given every hour.

If the griping and spasmodic pains be severe, in addition to hot water to the feet, and fomenting the abdomen with

flowers, the annexed antispas-
xture must be employed. Take

nate of ammonia .	½ drachm.
's powder . . .	2 scruples.
hor mixture . .	6 ounces.
ure of valerian .	2 drachms.

o tablespoonfuls to be given
and repeated every three hours,
r times, till the pain abates: if
second dose no abatement has
ace, the injection prescribed in
lly (which see) is to be employed.
as the pains and most urgent
s have been subdued, one of the
pills should be given every four
l the evacuations begin to show
. tendency. Take of—

ound rhubarb pill	20 grains.
œtida pill . . .	20 grains.
nel	18 grains.
ct of henbane . .	15 grains,

le into twelve pills.
l no action be produced, after these
ave been obtained, upon the skin
neys, such a mixture as the fol-
to be employed. Take of—

hor water, to make	8 ounces.
lered nitre . . .	1 drachm.
ts of sweet nitre .	½ ounce.
ure of squills . .	1½ drachms.
nonial wine . . .	1½ ounces.
p of saffron . . .	3 drachms.

ree tablespoonfuls to be taken
r hours.
e system will require great re-
after the prominent symptoms
ced, great attention must be paid
liet, care being taken that it is
y light and easy of digestion;
ies of quinine wine and iron must
ved up, for some time afterwards,
nge of air, the tepid bath, and a
use of the flesh-brush.
utumnal dysentery of this country
nerally be cured by one or two
doses of castor oil, taken on alter-
s, with 25 drops of laudanum in
d an assafœtida pill night and
, on the day between the doses of
See CHOLERA.

ŒNORRHŒA.—A difficult and
secretion. See WOMB, DISEASES

EPSIA.—A difficult and painful
. See INDIGESTION.

NŒA.—An oppressed and diffi-
thing. Dyspnœa, or, as it is
es called, shortness of breath, may
m many causes, either affecting
s themselves, or from the *state of* the stomach indirectly acting on them; in all cases, however, it is regarded as a symptom of some organic or functional disease.

A few drops of sulphuric ether in camphor water will most frequently afford immediate relief; where, however, it is of frequent recurrence, inhaling the steam of warm water, or water on which camphor, tar, creosote, ether, or other compounds have been poured prior to inhaling, may be adopted as palliatives. See ASTHMA.

DYSURIA.—A great difficulty to make water. See URINARY DISEASES.

E

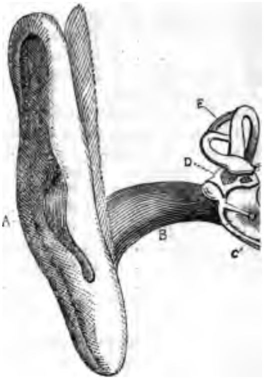
E, as a numeral, stands for 250; and, as well as being the fifth letter in the alphabet, is the fifth of the dominical letters of the calendar.

EAR.—The organ of hearing. Of all the senses, that of hearing is, in the apparatus by which the function is carried on, the most complex and elaborate. The organ, or rather series of organs, by which this important sense is performed, is divided into the *external* and *internal* mechanism,—the one collecting and condensing the vibrating rays of sound, and transmitting them to the internal ear, from whence the impression is conveyed to the sensorium or brain, there to be interpreted into words, symbols, or ideas. As we have already said, and shall have occasion hereafter more fully to show, all the senses are modifications of the first *touch*, or feeling. Without going deeply into the physiology of hearing, it will be sufficient, to make the subject understood, to say that every sound, from a whisper to the blow of a sledge-hammer, produces a concussion of the adjacent atmosphere, causing the air to vibrate in a straight line from the point of concussion; these rays or thin currents of sound are collected by the cartilage of the ear, placed in such a position in the head as to receive all undulating currents coming in front and laterally towards one or both. The sounds so collected by the external ear are carried through the auditory passage to the internal ear, where the vibrating air acts as a stimulant to the chain of very minute bones that, thrown into action, strike on the drum of the ear, *the* sound being reverberated and magnified by passing along a series of canals and galleries—some filled with air and some with water—till eventually the tremor of the original sound reaches the termination of the internal mechanism, on which the auditory nerve is expanded, as the optic nerve on the retina, and from whence the impression is conveyed to the brain to be interpreted. It will be now necessary to follow up these general remarks by a brief but more particular description of the organ and its parts. Anatomists divide the ear into three portions,—the external, internal, and middle ear.

The EXTERNAL consists of what is virtually called the ear—the oval-shaped, irregular cartilage, situated behind the temple, and at the *ramus* or shaft of the jaw. This cartilage, or *pinna*, is divided into several parts, each elevation and depression receiving a name,—such as the *helix* and *anti-helix*, *tragus*, *anti-tragus*, and *lobus;* the several depressions, channels, and furrows of the pinna, or ear proper, all leading into a central hollow or funnel-shaped cavity called the *concha*, or shell, its lower extremity terminating in the external auditory passage, the *meatus auditorum*.

The MIDDLE EAR commences with the auditory passage—the continuation of the *concha*—and which conveys the vibrations of air to the *tympanum*, or drum, a delicate membrane terminating the tube of the *meatus*, and covering the rugged entrance of a small cavity in the temporal bone. Immediately behind the tympanum, and connected with it, are three extremely minute bones, connected with each other, and called, from their fancied shapes, the hammer, *malleus;* the anvil, *incus;* and the stirrup, or *stapis*. When stimulated by the vibrations of air, the three small bones have the power of tightening the tympanum, as the malleus or hammer strikes it, the reverberation of sound being prolonged and magnified by passing round a series of small cavities in the temporal bone, called the mastoid cells, and the vestibule.

The INTERNAL EAR commences at the end of the vestibule, and is generally called the labyrinth, from the variety and number of the windings and passages of which it consists. The first of these are the semicircular canals, of which there are three,—the perpendicular, horizontal, and oblique, according to their situations; these terminate in as many vase-like cavities, called the *ampullæ*. The last portion of the labyrinth, or internal ear, is the *cochlea*, an externally c bone, resembling the snail or p shell, and from which reseml derives its name. A thin, bony divides the *internal* convolutio cochlea into two passages, cal their direction, the stair of the (*scala vestibuli*), and the stair of panum (*scala tympani*). Over a vations and depressions of the co its two *scalæ* (each having a name) is spread a very fine an membrane, on which is expa filaments of the cochlear nerve, t part being made extremely se the slightest undulation of so actual seat of hearing residing nervous expansions on the cochl ear, as the eye, nose, and tong special nerve, from which it d function of hearing. The nerve for this duty is called the "seven or auditory nerve, which, as it ap the auditory portion of the temp on each side, divides into two b one, called the facial, or hard *portio dura*, runs forward to be di on the face, while the other a portion, called the auditory, or t *mollis*, or soft portion, enters the bone, and, dividing into many and twigs, diffuses itself over the parts of the middle and internal e lining membrane of all the ca



THE EAR.

A. External Cartilage. B. Auditory C. Tympanum and Eustachian Stapis, Incus, and Malleus. E. Se Canals. F. Cochlea or Shell.

cavities of the internal ear, on which each filament loses itself, is by some anatomists supposed to consist entirely of the thin expansion of the nerves themselves.

The external ear is lined by a reflection of the integument of the face; the middle ear by a delicate tissue, the continuation of the mucous membrane of the mouth, conveyed to it by the eustachian tubes; and the internal ear by a still more delicate investment, supplied by the nerves themselves. A set of extremely minute muscles move the small bones of the ear, causing them to vibrate on the fluid contained in some of the canals, and on the air enclosed in others, the nerves receiving their impression from the tremors conveyed to the air or water in these passages and cavities.

EAR, DISEASES OF.—These principally proceed from inflammation in one form or other, inducing abscess, thickening, an excessive flow of the proper secretion, or an entire absence of that natural protection.

When active inflammation takes place, which will always be known by the heat, tenderness, and heightened colour of the part, with acute pain and headache, the treatment consists in acting on the bowels by the usual cooling saline purgatives, and warm fomentations of camomile tea or bran poultices, or by the application of a roasted onion, cut in two and placed over the opening of the auditory passage.

EAR, EXCESS OF WAX IN THE.—This is frequently the cause of all the noises heard by the patient, which he likens to ringing of bells, blows of sledge hammers, rumbling of carts, and other dissonant sounds.

As we have shown under Expectoration, the mouth is always, even in health, exuding a secretion to keep the mucous membrane in its healthy function; so the membrane lining the nose and ears is always exuding a secretion to keep them moist, prevent dust and insects irritating the nerves expanded upon them, and, in fact, keep the tissue in the healthy exercise of its function.

In the ear, this secretion is called wax (see WAX)—a bitter, viscid exudation, so rank in its smell that no insect will intrude upon the spot protected by such a guard. When this is thrown out in excess, the watery portion is driven off by evaporation, and a hard mass, like a plug, firmly adhering to the sides of the passage, effectually prevents the access of sound to the tympanum, or, passing through such a medium, conveys those unreal sounds to the nerve of hearing which the patient likens to thunder, or some other imaginary noise.

The TREATMENT of this affection consists in removing the obstruction, and preventing its recurrence. For the first, an injection of warm water, or soap-suds, thrown into the ear by a syringe, is all that is necessary, if a warm poultice has been previously applied to the ear to expand the passage and facilitate the removal of the wax. The syringing should be repeated three or four times a day, the instrument being held about an inch from the orifice. When the wax is difficult to remove, a little almond oil should be dropped into the ear between the times of using the syringe, a little cotton being put in to retain it.

The same symptoms arising from indurated wax may proceed from congestion of the brain, or apoplexy, when, of course, such local treatment is quite unnecessary.

When there is an absence of the proper secretion, and the ear looks red, dry, and shining, friction with the fingers behind the ear, and the insertion of some wool soaked in almond oil, on which two or three drops of friar's balsam have been poured, placed in the ear, will, in a few hours, stimulate the vessels to throw out their proper secretion.

EAR ACHE is an affection that depends more on sympathy with the neighbouring gums than on any other cause. The irritation caused by cutting the permanent teeth in youth, and the wisdom teeth in adults, is the most frequent cause of this distressing pain, which can always be relieved by scarifying the gum above the tooth, by inserting a little wool in the ear wetted with laudanum, and covering the ear with a large hot bran poultice. If these means do not afford relief, give a blue pill and black draught in addition, and apply two or three leeches behind the ear. When the earache proceeds from cold, or some nervous affection of the head, the wool with laudanum in the ear, and fomentation of camomiles, will in general subdue the pain.

EAR-TRUMPET.—A mechanical appliance for the use of deaf people, made generally of a thin metal, which, reverberating and magnifying the speaker's tones, produces, without the necessity of raising the voice, a distinct utterance, perfectly intelligible to the person addressed. Ear-trumpets are made of several articles, and the mechanism is now brought to such perfection that they become of the highest value to such as are suffering from the deprivation of hearing.

EARS, SORE.—A complaint to which scrofulous children are very liable during the period of cutting their teeth. The fœtid discharge and unsightly sores behind and surrounding the cartilage of the ear are both very unpleasant to the sight and harassing to the patient from their pain and obstinacy.

To attempt to cure such a constitutional cause by local applications would be both mischievous and absurd. As such causes arise from the irritation of the teeth, we shall postpone our remarks upon this treatment till we come to the subject of Teething, which see.

EARTHS.—The name given by chemists to a class of imperfect minerals, forming, in many instances, oxides of metals, which constitute what scientific men call the crust of the globe, or, in other words, the earth beneath our feet, and lying above the deeper seated and pure metals.

Chemists divide the earths into three classes, according to their chief constituents; as the *alkaline* earths—as baryta, lime, magnesia, &c.; the *argillaceous* earths, or the clays—such as those containing alumina; and the *silicious*, or the sands, and such as contain silica or flint.

Though all of these are largely used in the arts, and yield highly important products, most of them are also useful, and several form very valuable drugs and remedial agents in disease. See MAGNESIA, ALUMINA, &c.

EARTH BATH.—The ancients were great advocates of this agent in the treatment of disease, but the practice had long fallen into desuetude, and would probably never have been revived, had not a recent class of Continental empirics again established it, and by the advocacy of some high names restored it to something like spasmodic vitality; for it is never likely to become a general practice, or find much favour with the public. In warm climates and light sandy soils, where the solar heat strikes deep, the idea of burying a patient up to his throat, naked, in the earth, for a certain circle of hours, might be reconciled to some principles of honest practice; but in this country, the project of planting a row of patients like sea-kale in our cold clay soil, with the hope of doing them service, is too preposterous to be entertained by any medical men who look for honourable and legitimate distinction.

EAU DE ARQUEBUSADE.—A once fashionable vulnerary water, highly esteemed for the cure of wounds, consisting of spirits of wine distilled with several aromatic plants.

EAU DE COLOGNE.—This greatly valued perfume, which derives its name from the city where it is so largely manufactured, consists of a distillation in alcohol of the oils of bergamot, orange, rosemary, bruised cardamom seeds, and orange-flower water. As a perfume, it is pungent, aromatic, and refreshing, and something like our lavender water.

EAU DE LUCE.—A powerful restorative water, or, more properly, spirit, only differing from our most powerful *ammonia fœtissima* in having mastich and the oils of lavender and amber dissolved in it. It is extremely powerful, and should on no account be imprudently applied to the nose. Eau de luce is known from all other articles by being of a milky white, or whitish appearance.

EAU DE RABEL.—A Continental medicine, composed of rectified spirits, or alcohol, distilled with a third of sulphuric ether.

EAU DE SAVLILE.—The name of a French bleaching liquid, composed of carbonate of potass and chloride of lime dissolved in water, then saturating the solution with chlorine gas.

EAU DE VIE, OR AQUA VITÆ, Water of Life.—A name given by the French to brandy.

EAU MEDICINALE D'HUSSEN.—A foreign nostrum for gout and rheumatism, made by infusing meadow saffron in sherry, or some other white wine, and taking from half a teaspoonful, gradually increased to a dessertspoonful, for a dose.

EBULLITION.—The boiling point: a term used in chemistry to indicate when water has attained such a degree of heat that it is on the point of being converted into steam.

EBUR.—The Latin word for ivory. *Ebur nigrum*, ivory-black.

ECCHYMOSIS.—Any discoloration of the skin, caused by the effusion of blood into the cellular tissue below it. The most intelligible explanation of an ecchymosis is in the familiar instance of a black eye. Ecchymosis is in general produced by a blow, fall, or a bruise, which rupturing some small vein beneath the cuticle, the blood escapes in the cells of the membrane, and, showing through the transparent cuticle, gives the livid appearance which forms the character of the injury. Sometimes, in cases of great constitutional debility and physical relaxation, as in scurvy or typhus, the small superficial vessels give way without violence or injury, causing those purple patches on the body so serious a symptom of the disease, and known as *petechiæ*.

ECLAMPSIA.—The name of a very formidable species of convulsions to which women are subject in cases of severe labour, or as a consequence of excessive flooding after delivery. At whatever stage it arrives, or whether the result of irritation or exhaustion, eclampsia is always a most alarming condition. See LABOUR.

ECSTASIS.—To be in a state beyond reason or control, beside oneself; a species of ecstasy. See TRANCE.

ECTHYMA.—A particular disease of the skin, of which there are several varieties. See SKIN, DISEASES OF.

ECTROPIUM.—Avertion or turning out; a disease of the eyelids, by which the ciliary ridge, or the margin in which are the eyelashes, when the upper lid is affected, point upwards. The treatment of this somewhat rare disease depends on the character it usually assumes; in general, the judicious employment of lunar caustic may be depended on for a cure.

ECZEMA.—A vesicular disease of the skin, in which the eruption appears in a very minute crop of vesicles. See SKIN, DISEASES OF.

EFFERVESCENCE.—The bubbling up or agitation observable in any fluid through which a quantity of gas is escaping, as in the case of the mixture of a soda and seidlitz powder; the hissing noise created by the addition of the acid to the alkali is called the effervescence, and the gas given off by the mixture, carbonic acid gas.

EFFERVESCING DRAUGHTS can be made with either of the fixed or with the volatile alkali, and with any of the vegetable acids. The proportion of the two ingredients depends upon the acid used to neutralize the alkali; the following proportions, however, will always afford, to a tumblerful of water, a copious and refreshing draught; and if a small quantity of syrup of orange-peel or capillaire, and a tablespoonful of brandy, be previously mixed with the water, a grateful and exhilarating beverage will be obtained, which in hot weather will be found extremely beneficial. Take of—

1.	Carbonate of potass	2 scruples.
	Tartaric acid	25 grains.
2.	Carbonate of soda	½ drachm.
	Tartaric acid	½ drachm.
3.	Carbonate of ammonia	½ drachm.
	Citric acid	25 grains.

EFFLORESCENCE.—A term used by physicians to indicate a rough, powdery condition of the skin, observable in some cutaneous diseases. Also a term used by chemists to characterize certain salts which, on exposure to the air, give off much of their water of crystallization, and become dry and powdery on their surfaces. Of this class are all the salts of soda. Efflorescence is contradistinguished from deliquescence.

EFFLUVIUM.—A smell, an odour, caused by some gas, vapour, or exhalation arising from any cause or substance. The word, both in the singular and plural, is in a medical sense confined to offensive odours or noxious gases, or such as are injurious to health.

EFFUSION.—The pouring out of any fluid, whether into a cavity of the body or into the cellular tissue. An effusion may be either of serum or of blood, which, if poured out on the brain or into the bag of the lungs, produces apoplexy, or water on the brain, in the first instance; and congestion, or water in the chest, in the other. Effusion may take place in all parts of the body, into the joints, the lining membranes of cavities, or between the skin and muscles. See CONGESTION.

EGESTA.—A medical term for whatever is discharged from the body as waste or *débris*, and the opposite of *ingesta*.

EGGS.—These valuable articles of diet will be considered under the article of Food, which see.

EJACULATORY.—Ejecting or casting forth. The name of a set of delicate muscles peculiar to the male, and situated at the bulb of the urethra; their function is to elevate the bulb, and expel the secretion.

ELASTIC GUM.—The name given to Caoutchouc, or India-rubber, which see.

ELASTICITY.—The property which belongs to several bodies of recovering their original form when unduly elongated or stretched, and the cause of tension withdrawn. Among vegetable substances, the india-rubber presents us with the most perfect example of elasticity in every direction. Muscular fibre also affords a good illustration, and some of the metals present the same property, but only in one direction—that of recovering from a bent to a straight direction. The combination of steel with india-rubber called vulcanized caoutchouc, however, gives a material which possesses an elasticity capable of restoration in every direction; it has therefore been largely employed in the manufacture of surgical appliances of every description, cushions, beds, bandages, &c.

ELATERIUM AND ELATERINE.—The active alkaloid principles of the wild cucumber, and the most powerful purgatives we possess, being excessively drastic in their action. In all cases of emergency, where a rapid operation on the bowels is required, and it is necessary to lower the system by copious watery evacuations, as in apoplexy and dropsy, elaterium becomes most valuable. The principal preparation of the wild or squirting cucumber is an extract—the *extractum elaterii*, the dose of which is from ¼ to ½ a grain.

ELBOW JOINT.—This articulation consists of three bones,—the lower extremity of the *humerus*, or bone of the arm; and the heads of the two bones of the forearm, the *radius* and the *ulna*. These bones are firmly bound together and secured in their places, and their action guaranteed, by a number of powerful ligaments, both anterior and posterior as well as lateral and transverse, independent of internal securities and protections. The elbow joint admits of four motions,—flexion and extension, that is, the bending of the forearm on the arm, and its after extension or bringing back; and the half rotatory action of the *radius* on the *ulna*, called pronation when the back of the hand is turned downwards, and supination when the back of the hand is turned upwards.

The elbow joint is subject to severe inflammation, which frequently terminates in the mortification or death of a portion of the three bones. This disease only occurs in scrofulous persons, and children of a very diseased habit. It was formerly the custom to amputate the arm for this disease, but it is now usual to attempt its cure in the early stage by producing great counter-irritation by means of the actual cautery, and, in the advanced condition, by cutting into the joint and removing the entire portion. This operation, which has been highly successful, is called excision.

ELDER.—This common-looking but fast-growing plant is an article of great medicinal utility, every part of the tree being of some special value.

PROPERTIES AND USES.—The elder, or *Sambucus*, though now but seldom used, was at one time held in great esteem, the root, bark, leaves, flowers, and berries being each used for a different object; while so highly was it valued, that the bark, dried and powdered, was used as a snuff in all nervous affections of the head, and a juice expressed from the stem and root was regarded as a specific against the bite of an adder or mad dog.

The most important of the operations of elder were those of a purgative, diuretic, and emetic. That all parts of the plant possess the first two of these properties there can be no doubt; modern practice has, however, ignored all these and other qualities, and elder is now only employed as a cooling salve, or lotion.

The only preparations now in vogue are the two ointments—one made with the leaves and the other with the flowers,—and a water distilled from the elder flowers. The ripe berries act as a cooling laxative, and the wine made in the country from the fruit is, when taken hot, a most efficacious diaphoretic, producing a copious perspiration.

It is as a cosmetic, however, that this plant is most serviceable. In cases of freckles, blotches, or any eruption on the face, the white elder ointment—that made with the flowers—rubbed into the face or hands before going to bed will, after a few applications, remove all blemishes from the countenance. The elder-flower water, both as a wash for the hands and face, and as a collyrium for the eyes, will be found of great benefit; while as an eye water, in any slight heat or inflammation, it may be used with a certainty of benefit.

ELECAMPANE, or the *Inula campana*.—A common native wild plant, growing on the margins of fields and the banks of lanes, and flowering in July or August. It belongs to the Natural order *Compositæ*.

Elecampane is a warm, grateful stomachic, and when boiled with eringo, becomes a very serviceable expectorant in long-standing colds and asthmatic coughs.

ELECTRICITY. See MEDICAL ELECTRICITY, and GALVANISM.

ELECTRUM.—Amber, which see.

ELECTUARY.—A kind of confection, made with sugar or honey, and some other article, finely powdered and intimately united. The only electuary that now retains a place in the Pharmacopœia is the lenitive electuary. See CONFECTION.

ELEMI.—A gum-resin, formerly in use as an expectorant and diaphoretic, but now entirely superseded.

HANTIASIS ARABUM.—The
leg, Barbadoes leg, Yam leg, or
l Cochin leg, as it is differently
different countries; but the phase
ich forms the heading of this
: the Arabian variety, is the most
ə form of this loathsome disease.
iasis is a chronic swelling and
ent of one or both legs, to which
es in the West Indies are par-
subject, as well as the lower class
both in Africa and Asia. From
ant effusion of lymph beneath
e, the limb becomes, in time, of
ous, misshapen bulk, somewhat
g the root known as the yam,
texture and size like that of an
the cuticle resembling the bark
ə; at the same time the ears
elongated, and hang on the
, the face becomes swollen and
l, and all pendulous parts pre-
lly enlarged. The disease is a
affection, and requires frequent
, powerful sudorifics, and strong
tonic medicines. Hitherto the
s been considered hopeless, and
ing objects, shunned by all, creep
of human sight, and die in their
solitude. See Barbadoes Leg.

ATOR.—A name given by
s to certain muscles that lift up
any particular part; such as the
nguli oris, or the elevator of the
orner of the mouth, and *elevator*
o the name of an instrument
urgeons in trephining.

R.—An Arabic word, signifying
The Arabian chemists regarded
as a fine and extremely useful
or a medicine made by strong in-
d where the ingredients were
tirely dissolved in the menstruum.
is consequently much thicker than
e. Formerly there only existed
ounds, the *elixir vitæ* and the
prietatis. A century ago there
ral tinctures to which the term
given, from a supposed belief in
ior excellence of the compound
icine. The chief of these were
r of Health (compound tincture
, Elixir of Longevity (tincture of
ger, and canella alba), Stomachic
ompound tincture of gentian),
lixir (tincture of aloes and rhu-
ixir of Nature (compound tinc-
oes), Paregoric Elixir (compound
f camphor), and Elixir of Vitriol,
d sulphuric acid coloured. The
re the only elixirs now known in the shops, except the patent medicine called Daffy's Elixir.

ELM.—The bark of this well-known tree, the *Ulmus campestris*, is occasionally used in medicine as an astringent, wash, or gargle, about 10 drachms of the bruised bark to a pint of water being the usual proportion for making the decoction.

EMACIATION, or wasting of the body, is a symptom of many chronic and acute diseases, and when rapid and excessive, shows the gravity of the disease.

Emaciation or wasting of the muscles, is always characterized by an unhealthy pallor of the skin, accompanied by great relaxation of that membrane, the cuticle often hanging in folds.

EMBALMING.—The process of preparing a dead body to resist the decay natural to all animal fibre.

The Egyptians were the most celebrated embalmers of antiquity, and brought the practice to an art. Whether the preserving of their dead was an ordinance of their religion, or their religion grew out of the art of embalming, is uncertain; but the Egyptians, confined to a narrow valley between two chains of hills, with a mere strip of land on either side of the Nile for the cultivation of the seeds and fruits of the earth, it is very evident they had little soil to set aside as graveyards, if the annual inundation of the country, by the overflowing of their river, would not have washed their dead away every year out of their shallow graves.

EGYPTIAN MUMMY.

In this dilemma, it is reasonable to suppose that in their earliest ages the Egyptians interred their dead in the sands of the adjoining desert, though heıe again they must have quickly discovered that the dogs and jackals could easily reach the unguarded dead, and rifle their graves. That they did, however, at one time adopt this plan it is reasonable to infer, or how else should they have become acquainted with the fact that the sands of their desert contained the article most necessary for embalming, or, rather, preserving the dead? However the fact was obtained that this arid sand contained an immense quantity of coarse carbonate of soda, or nitron, if not from having buried their dead, and discovered how completely they were dried and made endurable, we have no means of knowing; but they did acquire the knowledge, and nitron henceforth became the chief article in the process.' Embalming soon after became the fashion, the law, and part of the religious obligations of the people. So lucrative a process, however, was not allowed to become a mercantile speculation, and being a religious rite, the priesthood took the business into their own hands, and forty days after receiving the corpse returned to the friends the mummy of their relative, so embalmed and protected, that whether kept at home, sent to the catacombs, or pledged to some usurer for a temporary loan, it was calculated to last intact till the crack of doom.

The first process in the art of embalming was to extract the brain and eyes, remove all the viscera from the chest and abdomen, and then immerse the body in a tank filled with a solution of nitron, in which it remained for several days. The body was then taken out and carefully dried, the cavities of the mouth, head, and trunk filled up—if a wealthy person, with benzoin, myrrh, and spices; if a poor or inferior individual, instead of these expensive drugs, the cavities were filled with bitumen,—and two artificial eyes placed in the sockets, and the body sewn up. The legs, arms, and trunk were then separately bound in bandages of linen, soaked in a liquid prepared with naphtha and benzoin, a spirit resembling friar's balsam. Eventually the limbs were placed together, the arms by the side, and a succession of rollers bound the whole body, enveloping the entire frame from head to foot. A mask, previously taken from the corpse, and painted to resemble life, was then placed over the enveloped face and firmly secured, and a parchment, on which was inscribed the name, age, and occupation of the person, affixed to the breast, and the mummy taken home.

EMBONPOINT.—A French term, signifying of a full body; a person well developed without being corpulent, but rather approaching to that condition. The term is chiefly confined to females.

EMBROCATION.—From a Greek verb signifying to soak, or moisten. By an embrocation was formerly understood a medicinal liquor, which was allowed to distil, or fall from a height very slowly and drop by drop on the part on which it was desirable for it to fall, and into which it was supposed to soak or be absorbed. The modern signification of the word is any oleaginous or spirituous compound of a stimulating character, and intended to be used with friction; consequently analagous to liniment, though, properly speaking, the latter term should be confined to all thick, oily mixtures meant for external use—such as camphorated oil, or hartshorn and oil,—and the word embrocation confined to spirituous compounds, such as opodeldoc, and some others.

EMBRYO.—To sprout out, or bud forth; a name given by anatomists to the *ovum*, or human germ in the womb, and so called up to the fourth month, or period of quickening; after which it receives the name of Fœtus, which see.

EMETICS.—A class of drugs which produce vomiting, by the influence of some peculiar and specific action on the nerves of the stomach, and independent of smell, taste, or local irritation.

There are few diseases to which man is subject, especially active diseases, in which emetics may not only be found useful, but often of the most signal service, not only by removing expeditiously from the system some crude or offensive substance doing hurt by its presence, but by the reactionary influence they exercise as stimulants, and also by the after effects on the bowels and skin.

Emetics also act powerfully as febrifuges in acute fevers and inflammations by the nausea and relaxation they cause when judiciously employed,—in other words, by preventing them acting as emetics, and giving them in such doses as will produce all the nausea and sickness without the consummation and vomiting. Emetics are either of the mineral or vegetable kingdom: belonging to the mineral are mercury sulphate, antimony tartrate and sulphuret, copper sulphate, and zinc sulphate; and of the vegetable are included ipecacuanha, squills, mustard, camomile tea, asarabacca, and tobacco.

Emetics should always be given in a

fluid form, and followed by draughts of warm water, to facilitate the vomiting and prevent the pain of straining. In cases of poisoning with mineral substances, the vegetable emetics are preferred, and when the poison is of a vegetable nature the mineral emetics are the most appropriate.

In the absence of any recognized emetic, the stomach may always be emptied by taking a copious draught of warm water, and then pressing down the root of the tongue by the finger, or the handle of a spoon; warm water, in which half a teaspoonful of salt has been dissolved, will act as a vomit in a few minutes; so also will a draught of weak rue tea, taken warm.

When the spoon or finger are objected to, tickling the fauces and uvula with a feather will always excite the stomach into action, especially if done after a draught of warm water.

There are some few conditions of the body in which emetics are not only improper, but dangerous; such as in cases of congestion of the brain or lungs, in cases of great debility, or in the advanced state of pregnancy. In sudden cramps, and exhaustion from excessive heat or fatigue, and in obstinate cases of constipation, when purgatives have no effect on the bowels —in all these emetics are highly beneficial. Vegetable emetics take from twenty minutes to half an hour to operate, while the minerals produce their action in eight or ten minutes.

EMIGRANT AND EMIGRATION.—So rapid has been the progress in colonization within the last twenty years, and so surprising the advancement in all the British settlements during that time, especially in the Australian dependencies, that emigration, no longer confined to the compelled and necessitous, has become almost a fashion; and thousands in the middle ranks of life are now making the most remote colonies their home, and, forgetting the dread of distance, the dangers of the voyage, and the 15,000 miles of water that separate them from the antipodes, cheerfully embark their families and fortunes in the hope of realizing, in a new clime, those promises of wealth and independence so glowingly held out to the intended emigrant in those favoured lands.

But whether the voluntary exile seeks to plant his fig tree and vine, and raise a new homestead, by the mighty lakes of Canada, on the rich levels of Southern Africa, turns to the teeming soil of New Zealand, or prefers the auriferous gullies or grazing pastures of Australia, there is one question he must ask himself before even harbouring the thought,—a question paramount to every other consideration connected with the subject, and one on which not only his own peace and prosperity hang, but on which the whole future of his wife and family depends for happiness or shipwreck. That question is this,—Is he a fit person to emigrate? Personal vanity will generally answer this question in the affirmative; and if the emigrant have any capital, that response will be even more emphatic and prompt, the deliberate judgment having seldom much to do in the decision.

In all the colonies from which the cry comes to the mother country for emigration, the article so earnestly applied for is *hands*, not *heads*—men and women who can work; in fact, the labourer, not the thinker, is the desideratum of all young states.

Should the progress of Australia continue at its present ratio for another fifty years, it is hardly likely that even the most successful of her five colonies will be in so advanced a position as to require the importation of that higher order of intellects who can only find patronage in long settled and highly refined governments and societies. With this fact before his mind, the emigrant who proposes to make his home in one of the more youthful colonies must go out with the full determination to work himself, both with his hands and his head; and that he may do the latter effectively, he should be capable of directing others how to do what may be required.

REQUISITES FOR AN EMIGRANT.—Any person who wishes to emigrate should possess a sound constitution, a good stock of animal spirits, a cheerful disposition, to enable him to make light of difficulties, with energy to surmount all the vexations and troubles that may befall; he should, besides, have a general knowledge of most of the useful trades, especially those of the blacksmith and carpenter, and should practically know how to weld a piece of iron, face an axe, and make a serviceable stool and table. A few days' experience in basketmaking before he quits his native land will materially add to his after usefulness. He should, in fact, be capable of turning his hand to any occupation. Besides these, some practical insight into agriculture and grazing is a primary and absolute necessity.

As everything in the colonies, particularly in Australia, is so entirely different, both in the physical and social state of the country, from what he has left at home, the chances are, that, unless the emigrant can depend with confidence on himself, disappointment will encounter him at every turn, and his expected contentment be changed into vexation and chagrin; if, however, he possesses such general useful knowledge as we have suggested the necessity of, and, moreover, has cheerfulness and self-reliance, he is the man not only to succeed, but to prosper in a new colony. There is, however, still another question he must put and answer with equal truth, and that is his age. Though some men at fifty-five have the stamina of others their junior by ten years, and although the Australian climate is salubrious and invigorating, there is an age at which no man with a growing family is justified in running the risk of so momentous a change as the transition from a native to a foreign climate; for in the doctrine of probabilities, the emigrant must take into account the possibility of his leaving a widow and youthful family to struggle in a strange land, and half the world removed from friends and relatives. He must at the same time remember that, between the time of his breaking up his home in England and his fairly starting on a field of enterprise at the antipodes, at least a full year will have been lost to him in his sum of natural life.

PREPARATIONS FOR THE VOYAGE—SELECTING A SHIP, &c.—The emigrant, having decided upon the colony to which he will emigrate, and settled his plan of operations when arrived at his destination, should next turn his attention to the vessel in which he is about to trust all that is dear to him in life; and as, apart from those considerations, a voyage to Australia embraces the greatest variations of climate, and is the longest passenger voyage undertaken, a sound, serviceable ship becomes a question of the greatest magnitude,—a ship where the ventilation will insure some degree of coolness under a tropical sun, and whose well-caulked timbers will afford a warm, dry residence when exposed to the storms and colds of a high southern latitude. For this purpose the emigrant must assure himself that the ship he selects is veritably what she is represented to be, an A 1, thirteen years, registered at Lloyd's, or whatever her registered mark may be; and satisfy himself that that character has reference to the ship at the present time, and not, as is too often the case, her reckoning and mark *twenty years before* she became the rotten, foul, and deceptive hull she probably now is. Satisfied on this point, his next duty is to find out the character of the owners, and whether she belongs to an honourable firm, or to needy adventurers whose object is less their commercial reputation than making money by their credulous passengers. And lastly he must find out, for the same purpose, who are the ship-chandlers and have the finding of the provisions and stores for the voyage, on the quality of which so much of the health and comfort of the passenger depends. These inquiries, of course, are designed particularly for the free emigrant, and not for the Government passengers, whose vessel and arrangements are looked after by the Emigration Commissioners. There are certain regulations now in vogue connected with all emigrant ships quitting these shores for British colonies, with which every emigrant should be informed. No vessel, whether chartered by Government or freighted by private persons, carrying above fifty passengers, where the voyage is computed at eighty days by sail or forty-five by steam; nor vessels with 100 passengers on board, no matter what the length of the voyage, so as not bound to North America, can put to sea without having a duly qualified surgeon on board. If bound, however, to North America, and allowing fourteen feet of superficial space to every passenger, a ship may clear without a surgeon, provided the number does not reach 500 persons, when a medical officer becomes imperative. If a passenger after going on board is found to have any infectious disease, or deemed by the surgeon to be unhealthy, he will be placed on shore, and his passage refused, though the money paid for it will be restored; in cases of wreck, another vessel is to be provided by the owners, or compensation awarded. Emigrants are to be maintained and lodged according to the scale of dietary and regulations agreed to, during the entire voyage, and for *forty-eight hours* after reaching port, if the passengers choose to remain so long on board For *every day* the ship is delayed after the advertised time of sailing, each passenger is to receive *one shilling per day* for subsistence money. All passengers in emigrant ships must comply with the regulations adopted for the well-being and government of all, and regard themselves for the whole period of the voyag as under the protection and guidance of the medical superintendent, to whom the dietary and comfort of all the emigrants, and the internal order and economy of the vessel, are absolutely entrusted during the voyage.

Every full-grown person to claim the whole of the articles specified in the Diet Tables: women entitled to receive the same rations as men; children from one to fourteen years of age, *half* rations; infants up to one year to be allowed *one quart of water a day, but no rations;* two children of twelve years of age to be rated as one adult. No ships are allowed to carry passengers on more than *two* decks, and no vessel to ship more passengers than in the proportion of *one* adult to every *two tons* of registered burthen.

It is also compulsory for every vessel of 200 tons to carry *two* boats; if of 300 tons, *three* boats; and if of 400 tons, *four* boats: one of these to be a LIFEBOAT, fitted with floats, buoys, and appliances in case of accidents in the water; and, finally, no emigrant ship shall be permitted to carry gunpowder, vitriol, raw hides, guano, or any cargo that may be offensive.

THINGS NECESSARY FOR THE VOYAGE, AND PRECAUTIONS.—Though the owners are bound to keep floats and life-buoys in readiness, it often happens that when most wanted they are not to be found; or, if kept in readiness in their place, during a general misfortune, in the selfish scramble which the dread of danger always provokes, it generally happens that such articles will be possessed by the strongest or the first comer: on this account, each emigrant family should provide itself with the necessary apparatus for its own protection, and keep them suspended in a convenient place in its own berth. See directions given for Cork Jacket.

The necessary articles which every emigrant will require as an outfit for the voyage is the subject which will next command his attention; and as between the time of his leaving these shores to his reaching the antipodes he will have to pass through every variation of temperature, it will be necessary to keep his body properly clothed while passing through each. This may be effected without laying in a costume for each season he may encounter on the voyage.

The advice given by those who have repeatedly made the Australian voyage is to take nothing to the colonies not absolutely needed in the emigrant's occupation: to take out a redundancy of clothing is especially impolitic, as all such articles can be obtained as abundantly and cheaply there as in England; besides, by so doing, adding materially to the bulk of his luggage, which in every case should be condensed into as small a compass as possible. What is chiefly required is a couple of suits of common strong slops, with a sufficiency of linen, worsted, and cotton stockings, and a few handkerchiefs. Formerly, when no washing was permitted during the voyage, the outfit for body linen for both men and women was heavy and expensive: now, however, that *two days* in the week are allowed for washing, much less clothing is required. The emigrant is warned not to fall into the error of thinking that *old clothes* are good enough for the rough duty of a sea voyage, that very roughness requiring them to be both new and strong: if otherwise, the constant repairing which will be necessary with both male and female apparel will become an incessant tax on the emigrant's time and patience. Both adults and children should wear on board light but not thin-soled *shoes*, made with buckles or elastic sides, strings being avoided as apt to lead to accidents. In wet, cold weather, or whenever the decks are damp, thin cork soles should be worn in the shoes, with worsted stockings long enough to cover the knees; at the same time the trousers, waistcoat, and the sleeves of the coat should be lined with flannel or pieces of an old blanket. For females, a flannel bandage should be passed round the knees, which, with drawers, the cork soles, and an extra petticoat, will be apparel sufficient. When the occasion for wearing this additional clothing has passed away, the several articles are to be well dried, and put away till the latitude or state of the weather again calls them into use.

The following list of articles comprises *actual necessaries which every emigrant must possess on the voyage,* whether aided by the Government bounty or not: of course the number and the quality of the articles are entirely at the option of the purchaser, though the golden rule will be realized here as elsewhere in the emigrant's voyage.—"Enough for use, and nothing for superfluity":—A knife and fork; a tea and table spoon; pewter plate; a hook pot; a pint mug for tea or drink; meat dish; water-can; washing-basin scrubbing-brush; two cabbage nets; half a gallon of sand; flour bag; Bath brick; two sheets of sand-paper; two coarse canvas aprons; hammer and bag of mixed nails; gimblet; a long leather strap and buckles to secure the bed on deck, when twice a week it is exposed to the sun and fresh air for purification; and, lastly, three pounds of marine soap.

As these articles are all necessaries of comfort and cleanliness,—the latter so imperative a consideration on board ship, —*not one of them can be dispensed with.*

Small articles which require to be dried —such as shoes—should be put in a cabbage net, and, when the weather permits, secured to the shrouds or rigging, where they can be dried thoroughly, and without fear of losing them overboard. For this purpose the emigrant will do well to have an extra large net for such miscellaneous articles.

As the space allowed each passenger is limited to a bare sufficiency, care should be taken not to encumber the berth or compartment given to each emigrant or family with needless articles. Everything not actually wanted on the voyage should be securely packed up in strong boxes, properly addressed and numbered, and sent to the ship some day or two before the emigrant's going on board, a list being made at the time of packing of every article in each package, according to its number, so that if anything should be wanted, a reference to the list will show in what box the needed article will be found, and by this means save the trouble and annoyance of searching the hold for several boxes, and having to unpack many before finding what may be wanted.

The emigrant should avoid taking many trunks into his berth or cabin, as in rough weather they will be thrown about, and often with sufficient violence to produce painful bruises. A number of *large strong linen bags*, suspended by nails round the partition, or from the bulkheads, are by far the most useful and convenient receptacles for almost everything required; indeed, every article, if possible, should be hung either from the timbers overhead, or from the sides, care being taken to hang those articles likely to be broken by collision from the deck. To insure order and comfort in his cabin, the emigrant should devote a day on board, previous to embarking his family, in arranging his space, putting up nails—brass-headed ones being preferable, as not so liable to tear the clothes if caught upon them.

Besides the bags for clothes, for clean and dirty linen, there should be one or two kept for the children's dresses by night, and night-clothes by day, nothing being left at any time that can knock about the deck, should a sudden storm arise.

The following articles are provided by the ship for the use of each mess of six emigrants during the voyage, but are to be given up to the steward before disembarking:—1 mess kit, with handle; 1 tin oval dish, 14 inches long by 4 wide; 1 tin round butter dish, 7 inches wide and 3 deep; 1 bread-basket, 14 inches long, 6 deep, and 10 wide, with handles; 2 three-pint tin pots, with covers and bar-hooks, for boiling water; 1 three-gallon water beaker, properly slung for use; 1 potato net; 1 pudding bag; and 1 mess towel.

DIETARY, SHIP REGULATIONS, AND SANITARY SUGGESTIONS.—The importance of a sufficiency of wholesome food in all conditions and positions of life can hardly be too highly estimated; but at sea, and on a long voyage, there is a matter of still greater consequence to the health of the voyager than even the quantity or the quality of the food, and that is *variety*. Such is the astringent and specific effect of sea air on the human constitution, that during a long voyage, with every care paid to the health of the passengers by as far as possible making a change in the aliment, the system will succumb, and those of the soundest constitution fall sick under that most prostrating of diseases, *scurvy*. To remedy the predisposition to this scourge of the mariner and all compelled for a time to travel by sea, LIME JUICE, the most portable and useful of all the remedies for scurvy, is now, by the legislature, made an article of the dietary scale in all passenger ships, and a thing as necessary to be taken, after a short exposure to the sea air, as the meat and bread which form the daily sustenance of the crew. In all well-conducted ships, the property of liberal owners, the passengers are not put upon what is called the regulation dietary for two or three days after sailing, or till the vessel is fairly at sea, the passengers being fed on fresh meat, potatoes, vegetables, and *bread*. Every day, at noon, the rations are given out in the following proportions to every adult:—8 ounces of biscuit; 6 ounces of pork on three days of the week, and 6 ounces of preserved meat on the three alternate days; 6 ounces of flour daily; 3 ounces of oatmeal daily; 2 ounces of raisins on four days; 1½ ounces of suet on four days; ¼ of a pint of peas on three days of the week; 4 ounces of rice on two days; 4 ounces of preserved potatoes on two days; ¼ ounce of tea on four days; ½ ounce of cocoa nibs on three days; 4 ounces of sugar on three days; 2 ounces of treacle on four days; 2 ounces of butter on two days; and 3 quarts of water daily. Besides these, there are issued weekly to each adult, 1 gill of mixed pickles, ½ ounce of mustard, 2 ounces of salt, and ½ ounce of pepper. It is in the option of the surgeon to order for all children under seven years, 4 ounces of rice, or 3 ounces of sago, three times a week, in lieu of their proportion of salt meat.

In contrast to the above average dietary scale of emigrant ships generally, we subjoin the dietary table for the week which Mrs. Chisholm regarded as necessary and requisite for health, and which, though by many considered as excessive, will afford a good criterion at all times, by which the emigrant can test the ship's scale, and judge whether he is honestly dealt by in exchange for the sum paid for his passage.

Mrs. Chisholm's scale of dietary for seven days.—Biscuit, 3 pounds; beef, ½ pound; pork, 1 pound; preserved meat, 1 pound; soup (bouilli), 1 pound; fish, ¼ pound; flour, 3½ pounds; raisins, ½ pound; preserved fruit, ¼ pound; suet, 6 ounces; peas, ⅔ pint; rice, ¾ pound; preserved potatoes, ½ pound; carrots, ½ pound; tea, 1½ ounces; coffee, 2 ounces; sugar, ¾ pound; treacle, ½ pound; butter, ¼ pound; cheese, ¼ pound; oatmeal, 2 ounces; lime juice, 1 gill; pickles, 1 gill; mustard, ½ ounce; salt, 2 ounces; pepper, ¼ ounce; water, 5 gallons and 1 quart, and every infant 1 gallon and 3 quarts.

However liberally the owners may have drawn up their food tables, the best and most vigorous of appetites will, under the monotony of the scene and the sameness of the diet, give way, when the most homely viand while on shore would be regarded as a priceless boon. The emigrant should therefore, if possible, provide himself with a few articles to which he may resort as luxuries, after weeks of one uniform regimen; of such, the following will be found the most useful:—a ham, a dried tongue, a few pounds of patent flour, some good tea and lump sugar, a jar of walnut, cabbage, or onion pickle, a couple of bottles of wine, the same of brandy, some pots of jam, and a supply of preserved vegetables, especially if there are children. For other requisites, see the concluding section.

All passengers not on the sick list are to rise at seven in the morning, at which hour the galley fire is lighted for the day, the cook taking care that each family or mess has the use of the fire at the hours fixed for them by the master. When the passengers are dressed, the beds are to be rolled up, and the berth or deck swept, and all the dust thrown overboard before breakfast, the hour for which is between eight and nine. The dinner-hour is one o'clock, and the tea, or supper, six o'clock; the fires are put out at seven, and the passengers are expected to be in their beds by ten o'clock. After that hour one light will be burned at the main hatch, but *no naked light* will be allowed at *any time*, nor *any smoking permitted between decks*. Two days in the week are allowed for washing, but no washing or drying is allowed between decks. The scuttles and stern ports, when the weather permits, are to be opened at seven in the morning, and closed at ten at night, and the hatchways kept open whenever the weather permits. Twice a week the beds are to be well aired on deck, twice a week the passengers are to put on clean linen, and, on Sundays, every one, clean and respectably dressed, will muster at ten o'clock for divine service.

As it is the pride both of the captain and the surgeon to land their passengers in health and comfort, every one on board an emigrant ship should not only implicitly conform to the regulations laid down for the safety and good order of all, but assist the surgeon, who is the officer specially entrusted with their welfare, in enforcing, if necessary, those moral and sanitary rules framed for the well-being of all.

In the narrow limits of a crowded ship, to preserve many hundred men and women in health, under so many changes of climate, there are several accessories necessary beyond mere abundance of food and water; those requisites are cleanliness—not only of the body, but of the berth or dwelling,—pure air, good ventilation, cheerfulness, and exercise. Cleanliness of the person can be insured by the daily ablution with soap and water, and by changing the body linen twice a week, and by the weekly use of the shower-bath. When the ship is not fitted with these requisites for both sexes, the passengers should construct one for themselves by hanging a bed-curtain on a small hoop, and fixing a colander in the centre; a larger hoop can then be stitched to the inside of the curtain half way down, and the whole suspended from the deck. A tub placed within the curtains will do well enough for the person to stand in, while a friend can pour a few large jugs of water through the colander. Cleanliness of the berth must be insured by sweeping it well out daily, and once a week washing it thoroughly, and then drying it completely by hot sand, which afterwards can be swept up and preserved for a future use. When the weather permits the opening of the scuppers and ports, there is no lack of good air, and by the hatchway perfect ventilation is insured; but when, during a gale, all these are closed, and the hatches are battened down, the state of the passengers below becomes often frightful in a degree, for few vessels are fitted with a provision to meet such a contingency. It is then that the means we shall advert to presently —fumigation with vinegar fumes—will be found so serviceable. After such occasions, the decks too often become wet; this is an evil of serious magnitude, and should be corrected as soon as possible by holystoning, swing stoves, or by sprinkling hot sand over them. Damp decks and draughts are two of the most prolific causes of sickness on board ship.

EXERCISE.—Among several hundreds of men, all their lives accustomed to active employment, the enforced quietude of shipboard is a privation almost directly and always severely felt. Some amount of bodily exercise and mental occupation consequently becomes an absolute necessity, as the monotony of the 'tween decks always produces a crushing effect on the spirits of the men. To rectify this state of things, both men and women are admitted on deck for a certain time, at regular hours, in groups or messes, and at any time when the state of the weather and the working of the ship will permit it. When below, however, there are dumb bells, and other means of muscular exercise, provided for the men, which every male, while in health, should use at least once a day. The surgeon, at the same time, is enjoined to encourage music and dancing among the emigrants; and as there are always several who can play the violin, flute, and accordion, there is seldom any difficulty in extemporizing an orchestra; while dancing, whenever the state of the ship will allow, should be indulged in at least two nights in the week.

The mind must be kept employed by reading, and as such an opportunity for obtaining information may never occur again, the emigrant should provide himself with a few light and interesting works, in which scientific, historical, and social matters are combined. Many of the weary hours of the tropical days, when the heat is too exhausting for any bodily exertion, may be passed with infinite pleasure to all if one of a party will volunteer to read aloud to the rest. This source of general amusement may be practised by a good reader without any fatigue, as he and his party recline in the shade near the port-holes, or under the bulwarks beneath the awning covering the deck. It is on long voyages, such as those to Australia, that some of the best traits of the disposition may be shown in little acts of mutual kindness and accommodation; and as the surgeon will establish a set of rules, so that everything shall be done at a proper hour, a willing and active passenger has it in his power to show a hundred kindly acts to those less able or less healthy than himself. All, in fact, on board an emigrant ship, and bound on the same errand, should, for the time they are on shipboard, endeavour to consider themselves as of one family,—keep together, sympathize together, and accommodate each other. The emigrant should particularly avoid interfering with the crew, or asking assistance from any of the officers, except the surgeon, who will always procure him what is wanted, or inform him how to obtain it.

WATER.—This at sea is so valuable a commodity, that every passenger is bound to be as sparing of his allowance as possible, and never waste a needless drop. When the water, as it often will do in the tropics, becomes for a time foul and muddy, *a few grains of powdered alum stirred into a glass will instantly precipitate all the objectionable matter, and make it clear* and perfectly wholesome. Or it may be filtered and rendered limpid by placing a piece of charcoal in the throat of a Wedgwood funnel, and running it off into a clean vessel. For the mode of making family filters, see FILTER. With regard to water, the emigrant should remember that while he is served with the *imperial measure*, the stock laid in is computed by the old measure, making a difference of one-fifth.

MEDICAL HINTS AND SUGGESTIONS.

ESPECIALLY WITH REGARD TO FEMALE EMIGRANTS.—The cause of so much suffering during the first weeks at sea from that prostrating affection called sea-sickness is by no means so frequently the result of the motion of the ship on the brain and nervous system as is supposed, but proceeds, perhaps in seven cases out of ten, from the individual going on board without any preparation—any annealing of the constitution—for the great, indeed, the total change that takes place between a life on shore and one at sea,—a change of diet, habits, occupation, and air. Ten days before the time fixed for sailing, the emigrant should commence a course of medicine; one that shall not only thoroughly cleanse the stomach and bowels, but shall at the same time stimulate the chief organs connected with the alimentary canal, the liver, and kidneys, to throw off any obstruction on their functions, and, finally, to open and cleanse all the pores of the skin. For these purposes he should take a compound colocynth pill night and morning for three days, a 5-grain blue pill on the fourth day, and, a few hours afterwards, a dose of salts and senna to carry all off. After a rest of two or three days, he should resume the colocynth pills, taking one a day, and a tumbler half full of the decoction of dandelion twice a day; and, the day previous to his going on board, he should take a warm bath, and while in it, thoroughly cleanse his skin with soap and the flesh-brush.

Females should adopt the same course in every respect, regulating the number of the pills taken to their requirements, and reducing the dose of the blue pill to 3 or 4 grains.

Children should be given senna and manna, or rhubarb and magnesia, though, in general, they suffer less than adults from sickness.

The *constipating effect* of the sea air has been already referred to, and as it has the power of checking the discharge of all the secretions, the emigrant must always provide against an evil which, if not rectified in time, might soon prostrate him with illness; and as the medical officer is only expected to be called to treat disease, it is the emigrant's duty, as long s possible, to keep his system in health. or this purpose he should take with him wo or three boxes of compound colocynth ills, and one box of blue pills of 3 rains each. Of the first he should take ree or four, and of the latter, one a week, viding the periods into every second or third day. Among the medical stores of the ship specially designed for the use of mothers and young children are stout and preserved milk, and it is at the option of the surgeon to allow every suckling mother a pint of stout daily, while, according to the age and health of the children, will the milk be distributed for their use. The next medical store common to all, but seldom commenced with till after the third week at sea, is the LIME JUICE. This invaluable remedy is delivered every day at the rate of *one ounce* to each person, with three-quarters of an ounce of sugar to mix with it.

Draughts and damp decks are two of the chief enemies on a sea voyage. To guard against these, the joints are to be protected by warm stockings and flannel bandages, and by good shoes, and cork soles inside. Women seldom need more than two strong gowns, with coarse aprons when at work; while the best dresses for children are strong unbleached overalls, and as little under clothing as possible. The mother who has to take an infant on board, or she who expects to be confined on the voyage, should, for some time before her embarkation, obtain from her friends all the old cotton or linen she can procure, and manufacture them into napkins, of which she must have very many dozens; for, as *these cannot be used again* on board ship, and must, the moment they are removed, *go through the port-hole*, unless she be *well* supplied, the mother will be very unpleasantly situated.

There is an item of such importance to the comfort of the emigrant, that it must on no account be omitted as trivial, but procured at once, either by the husband or wife. This is either some quires of common brown paper, or a few parcels of the waste paper sold to the shops for making up parcels; there should also be a bag in the berth particularly reserved for this most requisite article.

As the emigrant approaches the tropics, there is no beverage he will desire more eagerly than an effervescing draught. On this account, a bottle of carbonate of soda, and another of tartaric acid, should form important items of his sea stock. Both articles should be put into wide-mouthed bottles, and an egg-spoon kept beside them to measure out the quantities into the glass required for the draught; a full spoonful of the soda, and nearly as much of the acid, being sufficient for half a pint of water.

The following articles should be made

part of the domestic sea stock of every emigrant and family, as matters of comfort and health:—½ pound of carbonate of soda, ½ pound of tartaric acid, 1 pound of violet powder, a piece of adhesive and court plaster, a few bars of Windsor soap, 4 ounces of lavender water, a little aromatic vinegar, 4 ounces of strong acetic acid (strong vinegar, to fumigate the berth by pouring a few drops on a heated shovel), 6 or 8 dozen of colocynth pills, 3 dozen of blue pills, needles, thread, worsted, waste paper, 6 ounces of extract of lead (for bruises, cuts, and lotions), tooth-powder, a quart of lemon juice for private use, powdered alum, and a piece of charcoal.

EMMENAGOGUES.—A compound Greek word, signifying "to lead, or conduct by the month;" a class of medicines which exercise a direct action on the uterus, or womb, provoking the natural periodical secretion of that organ. A few of the articles embraced in the following list are only indirectly emmenagogues, stimulating the uterus by sympathy through the neighbouring organs; such as cantharides, by its action on the bladder, and aloes, by its stimulating the rectum.

EMMENAGOGUES.—Castor, assafœtida, galbanum, iron, mercury, aloes, hellebore, savine, ergot of rye, white mustard seed, rue, juniper, madder, and musk.

Purgatives may be made to act as emmenagogues by using such articles as principally operate on the rectum. Diuretics, in the same way, by exerting a strong action on the bladder, and tonics, when judiciously combined, may also be made equally effective.

EMOLLIENTS.—Such medicines or applications as soften, relax, and soothe an affected part. Emulsions of honey, gum, sugar, and eggs, are among the chief internal articles; and poultices, fomentations, and hot water, the best of the external.

EMPHYSEMA, or Wind Dropsy, as it is sometimes popularly called.—This disease is a swelling of a part or the whole body, caused by the entrance of air into the cells of the cellular tissue. Emphysema is most frequently caused by a fractured rib, which, lacerating the lungs, causes—by constant inspiration of the lungs—the air to enter the cellular tissue, till it is gradually diffused over the body. It also arises from wounds in the throat, or from injury to the lungs or windpipe. The only disease with which emphysema can be confounded is that of general dropsy, or *anasarca;* from this, however, it is easily distinguished by the crackling sound produced under the fingers by handling the swollen part, and by the absence of the pits when pressed, which always show when water is the cause of the distension.

This is so purely a surgical case, and one in which no non-professional person could be expected to prescribe, that it will be sufficient for us to say that the ordinary mode of treatment is by frequent small bleedings, by puncturing the body where the swelling is most apparent and troublesome, and by a steady pressure, kept up by means of bandages.

EMPIRIC.—A person who practises a profession on merely experimental knowledge, and repudiates all the dogmas and rules of the science. The word is now confined to any quack or unlicensed practitioner.

EMPLASTRUM.—The pharmaceutical name for a plaster,—as *emplastrum lithargyri*, litharge plaster, or diachylon.

EMPYEMA.—This word signifies matter within a cavity, and though generally confined in its meaning to a collection of pus in the chest, may also imply a similar accumulation in the abdomen. Empyema is merely the result of a previous cause—an inflammation and suppuration of the lungs, liver, or other organ,—and cannot, therefore, be regarded as a disease. The symptoms are the same as in chronic pleurisy, and the treatment consists in anticipating the efforts of nature to effect a cure, by puncturing the cavity and drawing off the matter collected. See TAPPING.

EMPYREUMA, OR EMPYREUMATIC.—By this term is understood that rank, burnt smell peculiar to wood when distilled under certain conditions; it is this odour that gives to tar, creosote, and smoked meats their distinguishing feature. Any vegetable substance severely scorched is said to have an empyreumatic smell.

EMULGENT VESSELS. — Some vessels, arteries, and veins supposed by the old anatomists to milk out or strain the serum from the kidneys.

EMULSION.—A soft, smooth liquid confection, sometimes made with oil, eggs, and honey, or with almonds, sugar, gum, and water.

Emulsions are generally prepared for colds and coughs, though purgative and diuretic medicines may be made into emulsions, such as when castor oil is rubbed down with mucilage and syrup, and turpentine combined with the yolk of egg. As a pectoral cough emulsion, the following prescription will be found useful and agreeable. Take of—

Sweet almonds (blanched)	1 ounce.
Lump sugar	½ ounce.
Powdered gum arabic .	3 drachms.
Water, to make . . .	16 ounces.

Beat the almonds, gum, and sugar with a few drops of water into a soft paste, then rub steadily down with the rest of the water, adding it by small quantities till the whole is made into a smooth mixture, strain through muslin, and add the following articles:—

Syrup of tolu . . .	1 ounce.
Paregoric	1 ounce.
Sweet spirits of nitre .	½ ounce.

Mix, and make a 16-ounce mixture, of which a tablespoonful may be taken whenever the cough is troublesome.

ENAMEL. — This substance, which covers the teeth from the crown to the neck of each tooth, is the hardest of all animal substances, and naturally so, to prevent it from being acted upon by what may be taken into the mouth or stomach; it is of a pearly white colour, and extremely smooth and glossy on its surface. It is most judiciously disposed, being thicker and harder on those teeth which are most used, and on those parts of them where the greatest friction occurs. For the scientific account of the disposition of the enamel in its fibrous threads and plates, with the special difference between the enamel of the human teeth and those of the lower animals, we must refer to Professor Owen's account of the subject.

The enamel, like the bone below it, and to which it forms the compost, is, like that structure, supplied with its quadruple set of vessels, and, like it, subject to corrosion, inflammation, decay, absorption, and death. See TEETH.

Enamel chemically consists of the phosphate, carbonate, and fluate of lime, magnesia, soda, and water.

ENARTHROSIS.—The name given by anatomists to those articulations of the human body which have a ball and socket, such as the shoulder and the hip.

ENCEPHALIC.—All the organs and parts contained in the cavity of the skull are called encephalic.

ENCYSTED.—By this term surgeons understand all such tumours or swellings as are contained within a bag, sac, or cyst. The most frequent form of the encysted tumour is found on the head, where it often appears in numbers at one time, and attains considerable size, necessitating removal on account of their unsightly appearance. See TUMOUR.

ENDEMIC. — Endemic diseases are such maladies as are peculiar to the inhabitants of certain situations or countries; as ague to Lincolnshire, goitre to Switzerland, and the *plica Polonica* to Poland. Diseases, however, may be both endemic and epidemic at the same time. See DISEASE.

ENDIVE.—A well-known plant largely used as a salad. The decoction of this plant is highly esteemed as a cooling antiscorbutic and diuretic.

ENDOSMOSIS. — The property by which a lighter fluid passes through a denser medium into a space beyond; while the property by which a lighter fluid passes out of the space that contains it through a denser medium is called *exosmosis*. See ABSORPTION, and ATTRACTION, CAPILLARY. It is by the application of these two properties that hides can now be tanned in as many days as they formerly took months to effect.

ENEMA.—A glyster or injection. The apparatus now used for the purpose of administering a glyster is called an enema syringe. See INJECTION.

ENNUI.—Mental lassitude, weariness, and incapacity for all work or occupation. The French regard *ennui* in the light of a disease, a species of hypochondria. See LASSITUDE.

ENSIFORM CARTILAGE. — The sword-shaped cartilage; the cartilage that, commencing at the end of the breast-bone, receives the insertion of the false ribs, and terminates at what is called the pit of the stomach.

ENTERA, OR ENTERIC. — The entrails or bowels; properly speaking, the whole contents of the abdominal cavity. See INTESTINES.

ENTERITIS. See INFLAMMATION OF THE BOWELS.

ENTEROCELE.—A rupture of the bowels. See RUPTURE.

ENTROPIUM AND EXTROPIUM.—Surgical terms for the turning *in* and turning *out* of the eyelid. In one case, the lashes rub on the base of the eye, causing constant pain and shedding of tears; in the other, the ball of the eye is exposed to all the accidents of dust and air.

EPICRANIUM. — The scalp, or integuments covering the skull.

EPIDEMIC diseases are such as are universally prevalent in a district or country at the same time, and which, after having endured for a certain period, decline and finally die out, at least for the season. Thus, influenza and cholera are examples of epidemic diseases. See DISEASES.

EPIDERMIS.—The covering of the skin; the scarf-skin, or cuticle. See SKIN.

EPIDIDYMIS.—A name given to a small oblong gland appertaining to men in the scrotum.

EPIGASTRIC.—One of the regions into which the abdomen is divided, over the stomach; the central portion of the upper part of the belly. See ABDOMEN.

EPIGLOTTIS.—The name given to the small oblong cartilage which, like a trap-door or valve, stands at the side of the *glottis*, or entrance to the organ of voice, and which, during the act of swallowing, falls over the opening, and effectually prevents anything entering the windpipe. See DIGESTION, *cut*.

EPILEPSY, or THE FALLING SICKNESS.—There are few diseases more ghastly to witness, or more serious to the sufferer, than epilepsy.

CAUSES.—Great irritation of the nervous system, some organic affection of the brain, worms, and hereditary predisposition.

Epilepsy may attack persons of all degrees of constitution—as the stout and the thin, the tall and the short, the child and adult, man or woman. With children there is great probability that the disease may pass off on their reaching the age of puberty; but with the adult the chances of relief are small indeed.

SYMPTOMS.—The attack is always sudden, accompanied with instant loss of sense and motion,—the patient, if standing, by the giving way of the muscles of the trunk, falling, or being thrown violently to the ground, the throat emitting a peculiar sharp cry. Violent contortions agitate the body, while convulsive spasms work every muscle of the face, which becomes hideously distorted, drawn on one side, and towards one of the shoulders; the eyes are rigidly set and staring, or roll frightfully in their orbits; the countenance becomes of a leaden hue; the veins are swollen and turgid; and a foam, like a horse's champ, issues from the firmly-closed jaws, between which the tongue protrudes, black and bleeding, from the cutting teeth. The entire body is in a constant state of convulsion, the legs are violently jerked out, and the hands and arms in ceaseless motion.

After a longer or shorter time the spasms cease, a glimmering of sense returns for a moment, and then the patient sinks into a profound sleep, drawing short, heavy, stertorous breaths; till, after many hours, sometimes a whole day, he wakes, exhausted and conscious, but quite oblivious of what has happened. Though the attack is always sudden and unexpected by those around him, the patient has always a foreknowledge of the coming fit, either by a great depression of spirits or unusual vivacity, sparks flitting before his eyes, noise in his ears, and by that cold creeping feeling that steals over the body, gradually ascending from the nerves of the feet till it vanishes in the brain, and called the *aura epileptica*.

There are two objects sought for in the treatment of this disease that must be borne in mind,—to abate the violence of the fit, and to prevent its recurrence.

TREATMENT.—The first thing to be done with a person in an epileptic fit is to restrain his muscular convulsions, prevent knocking of the head on the stones, and the bruising of the legs and arms, by forcibly holding the members; a piece of wood or leather must next be placed between the teeth, to save the tongue from being bitten through; and after untying all ligatures about the body, if there be much congestion of the head he must be bled, either from the arm, temporal artery, or jugular vein. When there is no actual plethora of the head, an emetic of 2 scruples of sulphate of zinc should be given as soon as possible, hot mustard poultices applied to the feet and thighs, and the fumes of ammonia held under the nostrils. As soon as the emetic has operated, doses of the following mixture are to be given till the paroxysm passes off; the head at the same time being kept cool with vinegar and water. Take of—

Spirits of lavender . .	½ ounce.
Sal volatile	2 drachms.
Tincture of musk . .	1 drachm.
Camphor water, to make	6 ounces.
Spirits of sulphuric ether	1½ drachms.

Mix, and give two tablespoonfuls every three hours.

As soon as the convulsive symptoms have been subdued, the bowels are to be acted upon by placing one or two drops of croton oil on the tongue, and giving a drachms of Epsom salts, and 1 drachm of carbonate of magnesia, rubbed down in peppermint water.

The chief treatment, however, lies in preventing the recurrence of the disease, and for this purpose the mineral tonics, with occasional doses of quinine, are the most serviceable, keeping the bowels open by a rhubarb and calomel pill. When the patient complains of drowsiness, pain in the head, and general torpidity after the paroxysms, it may be necessary to blister the spine or the nape of the neck, or apply the cupping glasses, or what is often better than either, establish a seton in the neck. See ISSUE.

The following mineral tonic remedies may be employed, one after the other, continuing each for at least a fortnight; or one of them may be continued to the end, if it suit the constitution: the vegetable tonic mixture prescribed to be used, whatever may be the mineral course adopted.

Tonic Pills.—No. 1. Take of—

Sulphate of zinc . . .	25 grains.
Powdered colombo . .	1 drachm.
Powdered ginger . .	½ drachm.

Extract of gentian . . enough to make into a mass, which divide into thirty pills; one to be taken every four hours.

No. 2. Take of—

Sulphate of copper . .	15 grains.
Powdered rhubarb . .	2 scruples.
Crumbs of bread . .	2 scruples.

Extract of gentian . . enough to make a mass, which divide into thirty pills: one every four hours.

No. 3. Take of—

Nitrate of silver . . .	10 grains.
Powdered ginger . .	½ drachm.
Powdered colombo . .	2 scruples.

Extract of gentian . . enough to make a mass, which divide into thirty pills; one to be taken every six hours.

Tonic Mixture.—Take of—

Hops	2 drachms.
Ginger root	1 drachm.
Quassia	1 drachm.
Carbonate of potass .	3 drachms.
Boiling water . . .	1 quart.

Infuse for eight hours, strain, and add, by mixing in a mortar—

Quinine	½ drachm.

Mix: two tablespoonfuls to be taken three times a day. Change of air, cold bathing, exercise, and a sufficiently nutritive diet.

Electricity, as a remedial agent, must not be omitted in the after treatment of the disease. For the mode of employment, see MEDICAL GALVANISM, OR ELECTRICITY.

EPIPHYSES.—The name given by anatomists to the protuberances seen on the extremities of the long bones, and attached by cartilage to the shaft of the bone. In childhood, and before these protuberances become thoroughly ossified, they are easily separated by a blow or a fall: this is particularly the case with the epiphysis of the elbow joint, when great care is necessary, in reducing the fracture, to keep the arm straight, and in such a position that the contracting muscles may not draw the dislocated piece of bone from its proper position.

EPIPLOCELE.—A rupture in which the omentum only is protruded. See RUPTURE.

EPISPASTICS.—An antiquated name for a class of medicines which draw the humours to one part, or in other words, blisters: any counter-irritant which will induce heat, redness, and pain. Mustard, euphorbium, tartar emetic, pitch, nettles, and cantharides, with issues, &c., may be so classed.

EPISTAXIS.—Bleeding from one or other of the nostrils. Hemorrhage from the nose. See NOSE.

EPITHELIUM.—The red part of the lips; that delicate cuticle only found on the inner lips of the mouth and *pudenda*.

EPITHEM.—Any liquid application to the body, as lotion, fomentation, or liniment. See PILINE.

EPSOM SALTS.—There are few drugs more universally known or more generally used than Epsom salts, and in certain diseases, none more beneficial. The town of Epsom, from whence the name of the salt has been derived, was formerly celebrated for its saline purgative spas, and invalids used to flock there to drink the waters for the benefit of their health. Since chemistry, however, has discovered the constituent principles of the water, and found that their medicinal properties depend upon a combination of sulphuric acid and magnesia, the spas have been deserted, and the salt—"sulphate of magnesia"—obtained much more abundantly and infinitely cheaper from sea-water, or rather from the *bittern*, the liquid left after extracting common salt from the sea-water. Epsom salts are also obtained from the magnesian limestone, by the addition of sulphuric acid.

PROPERTIES AND DOSE.—Epsom salts are largely employed as an active and cooling purgative; and in all inflammatory diseases, dropsies, or wherever saline purgatives are demanded, become one of our best and safest remedies. Though so beneficial in all plethoric habits of body, and useful as a purgative to males, Epsom salts should never be given to females, except, perhaps, in active disease.

Large doses of this salt should always be avoided, as they are apt to produce great exhaustion; besides, such doses are quite unnecessary, as half an ounce, mixed with a large quantity of water, acts quite as efficiently as an ounce and a half taken in a small quantity of liquid. The unpleasant taste of Epsom salts may be counteracted by mixing one-fourth of common salt with a dose of Epsom salts, drying it in the oven till all the water of crystallization is driven off, and then dissolving the powder in a tumbler of water, and drinking the whole off at a dose. The nauseous taste may be greatly blunted by squeezing the nose while drinking, and putting a bit of orange-peel into the mouth before removing the fingers and thumb from the nose.

In inflammatory fevers, where a quick action on the bowels is required, the strength and efficacy of the salts may be very greatly increased by the addition of ½ a grain of tartar emetic.

To persons of a sanguineous temperament, or plethoric habits, where with constipation there is impaired digestion, the following form of taking Epsom salts will be found highly beneficial, particularly so if 1 grain of quinine, 5 grains of dried carbonate of soda, and 2 grains of ginger are taken as a powder, an hour before dinner. Take of—

Red rose leaves . . .	2 drachms.
Cardamoms bruised .	2 drachms.
Epsom salts	2 ounces.
Boiling water	10 ounces.

Stirring the whole together, and infusing for four hours; then add—

Diluted sulphuric acid .	½ drachm.

Strain, and take two or three tablespoonfuls every morning, or every other morning, according to circumstances.

ERECTILE TISSUE.—An extremely sensitive and highly organized tissue of the body, forming a distinct conformation. There are two examples of it in the female, and one in the male. See Reproduction, Organs of.

ERECTOR.—The name of a pair of small muscles, whose duty is to elevate the organs to which they are attached.

ERGOT OF RYE.—*Cornutum secale*, or the Spur of Rye. This is one of the most remarkable drugs in the Pharmacopœia, considering its nature and its specific action on one particular organ—the womb. Ergot of rye, or spurred rye, as it is sometimes called, from its resemblance to a cock's spur, is a diseased formation occurring on the ear of the plant, and regarded as a mortification. In those counties where rye is largely used for bread, in bad years this diseased growth has been found to exist in the ear to such an extent, as to affect most seriously those who had partaken of the bread made from it, inducing both typhoid fever and even gangrene, and producing most serious consequences on the females who had eaten of it.

The ergot of rye is about an inch long, with one extremity pointed and turned downwards in a curve; black externally, and of a yellowish brown when broken, and has a faint alkaline smell. This drug exerts only one action on the body—a direct stimulating influence on the womb—causing the organ to contract, and expel whatever it may contain; it is consequently an invaluable remedy in all cases of protracted labour, when the expulsive pains are in abeyance, and eminently useful in expediting the birth in all cases of natural but slow parturition. As an emmenagogue, in cases of suppressed and difficult menstruation, the ergot is equally efficacious. The dose of the powdered ergot, in cases of labour, is from 20 to 30 grains; the powder, however, is a most objectionable form of exhibition. The dose of the tincture, *tinctura secali*, is from 1 to 3 drachms. The following mode of preparation is not only the most prompt in its action, and effective in operation, but answers the double purpose of a medicine and a cordial; besides, it can always be made fresh in ten minutes, whenever required. Take of—

Bruised ergot of rye .	2 drachms.
Water	½ pint.
Soda	10 grains.

Boil slowly for seven or ten minutes, strain, and to half a teacupful, add a tablespoonful of gin, enough sugar to sweeten it, and let the patient drink the whole at once and while hot. In ten minutes, or a quarter of an hour, the uterine action will take place; but should the ergot not produce the desired effect within half an hour, let the dose be repeated, first warming the decoction. See Labour.

ERGOTISM.—The effects produced on the system from eating diseased rye, sometimes exhibiting symptoms of a convulsive character; at others, all the characters of gangrene.

EROSION.—Eating away, like an ulcer.

ERRATIC.—A medical term applied to diseases which have a disposition to flit from place to place, like gout, rheumatism, or erysipelas. Flying, wandering, or irregular pains are called erratic.

ERRHINES.—Medicines put up the nostrils to cleanse the head, either with or without producing sneezing, and to stimulate the lining membrane of the nose to throw out its secretion. See SNUFFS.

ERUCTATION.—Flatulent discharges, belching, the sudden liberation of gases from the stomach. See FLATULENCE.

ERUPTION.—A term used to express any kind of cutaneous rash or efflorescence.

ERUPTIVE DISEASES, or the Exanthemata, diseases attended with more or less of inflammatory fever, resulting, after from two to four days, in an eruption on the skin; such as Measles, Scarlet Fever, Small pox, Glass pox, &c., which see, and SKIN, DISEASES OF.

ERYNGO, or Sea Holly, so named from its place of growth, being found upon every part of the coast. A decoction of the eryngo root, when made of sufficient strength, acts on the kidneys, and at the same time on the liver, and is very serviceable in all cases of congestion of the latter organ, or when the biliary secretion is defective. Taken in small quantities, and sweetened with honey, the decoction makes a good expectorant and demulcent. A confection, for the same purposes, is made by washing, macerating, and then cutting the roots into slices, and steeping them in boiling syrup. This is a very elegant, agreeable, and useful confection, and in cases of cough or hoarseness will be found of considerable service.

ERYSIPELAS, ST. ANTHONY'S FIRE, IGNIS SACER, or DETESTABLE FIRE, and THE ROSE, as this inflammatory, eruptive fever is popularly called in England and Scotland. The characteristic of this disease is a peculiar inflammation of the skin, the affected part being red, slightly swollen, much hotter than natural, with a distinct line of demarcation between the healthy and diseased parts.

The CAUSES of erysipelas are a plethoric constitution, previous affections, cold, excessive heat, or abrupt changes of temperature, a dissipated habit, irritating substances in the bowels; and it often occurs as a concomitant of putrid and puerperal fevers.

SYMPTOMS.—These commence with shivering, hot flushes, thirst, headache, coma, nausea, vomiting, and sometimes with delirium. The bowels are constipated, the tongue covered with a uniform white fur, while the pulse is hard and strong, or small, quick, and feeble, according to the tendency of the disease to the inflammatory or typhoid type. Between the second and third day the skin at some part appears inflamed; this is succeeded by an efflorescence of a bright rose colour, at first small, but gradually extending till it finally covers a considerable portion of the integument, the swelling progressing slowly, till the tumefaction is very considerable, while the dry, acrid heat in the part frequently amounts to actual pain.

When the disease occurs in the head, the whole scalp becomes tumid, the eyebrows and lids are swollen, the face greatly puffed, and the eyes often quite closed. Sometimes the swelling is so rapid that, without any warning, the patient wakes to find himself blind, and hardly able to articulate from the distended state of his lips and cheeks; and all this, in some cases, without pain or further inconvenience than a slight heat and stiffness of the parts.

After a few hours in some cases, or two or three days in others, the efflorescence terminates in small vesicles filled with a watery fluid, or it disappears in scales by desquamation of the cuticle. The fever, however, does not always decline with the removal of the local mischief, and if the head be the part affected, there is often an aggravation of all the febrile symptoms, delirium sets in, coma supervenes, and death may follow between the ninth and eleventh day. Erysipelas sometimes terminates by suppuration and gangrene, the latter a very serious result. A peculiarity of this disease is its proneness to fly from one part of the body to another, or to recede from the surface to settle on an internal organ; this *metastasis* (see ERRATIC) is a very unfavourable symptom.

TREATMENT.—Where the attendant fever is of an inflammatory type, the patient young and strong, and living in the country, it may be necessary, in the first stage, to take a little blood from the arm; but if the patient is advanced in years, weak, and living in a populous town, bleeding would be dangerous: in all cases it must be adopted with great care. To reduce the inflammation, instead of bleeding, the following powders and aperient mixture are to be given. Take of—

Powdered rhubarb . .	½ drachm.
Powdered jalap . . .	2 scruples.
Calomel	18 grains.

Mix, and divide into six powders: one powder to be taken every three hours. Take of—

Epsom salts	12 drachms.
Carbonate of magnesia	2 drachms.
Tartar emetic . . .	2 grains.
Peppermint water . .	8 ounces.

Mix: two large spoonfuls to be taken one hour after each powder, till the bowels have been well acted on, when both are to be discontinued, or given at longer intervals,—such as a powder every six hours, and a dose of the mixture every seven hours.

When the fever is high, the thirst great, and the heat of the skin excessive, the bowels having been first opened by the above medicine, the following fever mixture is to be employed. Take of the—

Spirits of mindererus .	2 ounces.
Antimonial wine . .	½ ounce.
Camphor water, to make	8 ounces.
Powdered nitre . . .	2 scruples.
Syrup of saffron . .	2 drachms.

Mix: take three tablespoonfuls directly, and repeat the dose every four hours. To quench the thirst, barley water, made with the juice of a lemon, is to be taken freely.

Wherever the local evidence of the disease may be, the inflamed part is to be immediately covered with *flour*, retained on the part by a handkerchief or light bandage, and fresh cold flour reapplied every three or four hours. When the head is affected, the hair must be cut short, and the face kept well covered with the flour. Erysipelas of the head and face is the most dangerous form of this disease, for the swelling is so universal, and extends so rapidly, that not only is every recognizable feature of the patient obliterated by the distension, but sight, hearing, and speech are prevented by the swelling of all the adjacent tissues; which, should it descend to the throat and windpipe, may in a few hours destroy the patient by suffocation,—to prevent such a contingency, it has been customary to apply the nitrate of silver (lunar caustic) to the throat, and sometimes, also, to the face,—a strong solution of the caustic, in the proportion of a scruple of the nitrate of silver to an ounce of distilled water and then applying the solution, by means of a brush or sponge, all over the throat. In some cases great benefit is derived by fomenting the throat and face with a hot decoction of camomile flowers; and in others, by the application of a cold saturnine lotion, made by dissolving half an ounce of sugar of lead in 3 pints of camphor water and a gill of vinegar, dipping cloths in the lotion, and continuing the application for about an hour, three or four times a day. In other cases, and particularly with old or debilitated persons, the most signal advantage is obtained by alternating the applications from hot to cold and cold to hot,—thus using the camomile fomentation every ten minutes for about an hour, and then the cold lead lotion in the same manner for another hour, intermitting the applications for three or four hours, and repeating the same means for the same length of time.

Where the typhoid symptoms are severe and there is much debility and loss of resistant power, the patient's physical stamina must be supported by tonics, and even stimulants. The best form of giving such remedies is that prescribed below, which should be given in the dose and at the time ordered in the formula. Take of—

Quinine	30 grains.
Port wine	1 pint.

Rub the quinine in a mortar with a few spoonfuls of the wine, so as to insure an equable solution; then mix with the remainder by well shaking the whole. Of this, half a wineglassful, or about 1 ounce, is to be given every two hours, the decanter or bottle being shaken up each time before using.

Sometimes there is great irritability of the stomach, leading to frequent retching or difficult vomiting. When such is the case, and the opening medicine ordered in the beginning has not allayed the sickness, the following effervescing draughts are to be taken every one, two, or three hours, according to circumstances. Take of the—

Carbonate of potass .	2 drachms.
Carbonate of soda . .	2 drachms.
Water	8 ounces.

Dissolve, and label the bottle "*Saline Mixture.*" Take of—

Citric acid, or tartaric acid	3¼ drachms.
Water	8 ounces.

Dissolve, and label the bottle "*Acid Mixture.*" A wineglass is then to be half filled with the saline, and another glass

with the acid mixture; the acid
ı to be drunk off immediately,
ly afterwards the saline mixture,
escence being allowed to take
ie stomach. Should the patient
rary the mode of taking the
he can have the two quantities
to a tumbler, and drink while
g, like ordinary soda powders.

ATIONS.—As a general rule, all
ous patients bear depletions
ution must therefore be exer-
nploying it. The patient must
perfectly clean, and the room
large and fully ventilated. If
abour occur in the house at the
person suffering under erysi-
patient should be sent away, or
ept or removed from the female,
at such times, particularly liable
, or be attacked with puerperal
whatever part of the body ery-
y occur, if hair be in the neigh-
it must be instantly cut closely
iet throughout must be light and
s, and the feet be kept hot;
unusual affection of the brain,
a supervenes, a blister must be
ween the shoulders. Finally, it
rne in mind that erysipelas is
r eruptive disease, and infec-

IEMA.—An unhealthy redness
a, like an inflammatory blush,
affecting a part, at others the
face of the cuticle, and bearing
iblance to erysipelas, but without
itional disturbance or infectious
There are many varieties of
ion, which will be found under
ses, and Red Gum, &c., which

R.—The name given by sur-
he scab or crust which forms
icle, after destroying the skin
; the hard cicatrix after a
a.

ROTICS.—A class of caustic
used to eat off, as it is popularly
goid growths, or excessive gra-
or what is known as proud
gs or compounds which have the
roding or dissolving the animal
nd forming new combinations.
important of the escharotics
ime, lunar caustic, bluestone,
a, arsenic, caustic potass, and
l acids. An escharotic may be
stimulating and violent as the
e of the potential cauteries, or
merely slightly or gently stimulating, as powdered sugar, which is sometimes used for the purpose.

ESCULENT.—Any vegetable substance that may be used as good and efficient food; any article wholesome as food; though the term is generally confined to roots, fruits, and grains.

ESOPHAGUS. See Œsophagus.

ESSENCE.—The active and characteristic portion of any substance prepared in a manageable form. Thus, when the active principle of any article which is too powerful for use is dissolved in a menstruum, all the flavour and quality of the substance is obtained in a form easy to be employed. Example: if 20 drops of corrosive essential oil of cinnamon, or peppermint, are dissolved in 4 ounces of spirits of wine, an essence is produced, a few drops of which will be sufficient for all purposes required.

ESSENTIAL OIL.—The oil obtained by distilling any aromatic plant, seed, fruit, or flower; of these the most important are peppermint, cloves, mace, aniseed, mint, cinnamon, orange, or bergamot, lemon, thyme, rosemary, &c. A small quantity of any of these dissolved in alcohol makes an essence. The English essential oils are so far superior to the French or foreign oils of this nature, that the difference in value is as respects pounds to shillings.

ETHER, or ÆTHER.—One of the most volatile and inflammable of all the spirits. Though there are several kinds of ethers used in medicine, the most powerful and chief in a medicinal sense is the sulphuric ether, made by distilling vitriol or sulphuric acid and alcohol in a glass retort. The other varieties are manufactured by combining one or other of the acids with rectified spirits, or spirits of wine and acetic acid: thus we have hydrochloric, or muriatic ether; the nitrous ether, or sweet spirits of nitre; and acetic ether.

Medical Properties.—Sulphuric ether, when taken internally, acts as a stimulant, antispasmodic, restorative, and diaphoretic, and applied externally, as a stimulant and refrigerator. The dose of sulphuric ether is from five to seven drops, either taken in water or combined with some other medicines; but as it is so excessively volatile, care must be taken to drink the dose directly it is poured out. In all cases of convulsion, spasm, hysteria, fainting, asthma, or nervous affections, ether is a very valuable remedy.

As a stimulating embrocation, in the proportion of 2 drachms of sulphuric ether to an ounce of camphorated oil, it makes an admirable application in cases of hard swollen breasts, stimulating the vessels, and inducing an absorption of the swelling, which, if unrelieved, might degenerate into abscess, or what is called a broken breast. In cases of congestion of the vessels of the head, or severe headache, consequent on nervous irritation or an excess of blood on the brain, great relief is often obtained by filling the hand with ether, instantly pressing the palm on the temple or forehead for the space of a minute, and then removing the hand, allowing the evaporation to take place. This is so rapid, that an intense degree of cold is instantly produced; this, generally, after one or two applications, by the grateful coldness produced, entirely relieves the pain. The patient must, however, *take great care*, while so applying the ether, to keep *his eyes* firmly closed, and avoid its running over the face. So powerful is the evaporation from this spirit, that a man would be frozen to death, without the hope of being saved, should he chance to break a bottle of ether, or spill a large quantity of it, over his throat and chest. A more manageable preparation for mixtures, called the spirit of sulphuric ether, is usually employed by physicians, the dose of which is from 10 to 15 drops in water. Ether is also used for inhaling in cases of asthma, the ether being poured on the hot water in the inhaler, and the fumes imbibed into the lungs through the mouthpiece of the instrument.

Ether so imbibed not only relieves the spasmodic constriction which causes the difficulty of breathing in asthma, but, when properly inhaled, not only allays all suffering, but produces *perfect insensibility* to pain; so that a patient operated on while under its influence, though awake and perfectly conscious, is totally insensible to the severance of his flesh and nerves. Ether was the first *anæsthetic* agent discovered, and before the introduction of chloroform was used for that purpose. The acetated and muriated ethers are employed in medicine chiefly as diaphoretics, the dose being from 15 to 30 drops in some medicinal vehicle. For the properties and dose of the nitrous ether, see NITRE, SWEET.

The compound spirits of ether, "Hoffman's anodyne," and an aromatic spirits of ether, are the other preparations occasionally employed, the dose of each being from 30 to 40 drops.

OBSERVATIONS.—*Ether is so hig inflammable, its vapour catching fir instantaneously, that too much cannot be taken in using it. If possib it should never be used at night, never near a fire or a light.*

ETHMOID.—The name of a sm bone at the base of the skull, so thin full of holes, that it has obtained name of the sieve, or ethmoid, from resemblance to that article. It is thro the apertures of this bone that filaments of the olfactory nerve p before their diffusion on the memb of the nostrils.

EUPATORIUM.—The plant kn as agrimony or hemp, of which there upwards of 250 varieties. The eupator belongs to the Natural order *Compo* and has been esteemed on account of expectorant and diuretic properties, for its beneficial action in affection the liver, and eruptive diseases caused any interruption in the function of organ: hence one of its names, *h torium*. The chief varieties in this cou are the water hemp, bastard hemp, bastard agrimony.

EUPHORBIUM.—A very irritating, and poisonous drug, the nous exudation of the *Euphorbia nalis*, an exotic plant belonging to Natural order *Euphorbiaceæ*. The po of this resin is so stimulating, th taken into the stomach in any quan or brought into any contact with nervous system by the nostrils, it duces the most violent effects, ca inflammation, vomiting, convulsions, delirium. The powder applied to the produces vesication, or small blis it is on this account frequently used adulterating blister plaster.

EUSTACHIAN TUBES.—Two of the ear, named after their discove an Italian anatomist, Eustachius, in each ear. The eustachian tube from the middle ear immediately be the tympanum, and running obliq downwards and forwards, termi behind the tonsils in the bag of pharynx. See EAR, *cut of*. The o of these tubes is to convey sounds to tympanum, when, from wax in the swelling, or other causes, the pr access to the internal ear is cut off.

It is from the assistance derived these tubes in hearing that deaf peo usually listen with their mouths open.

EVAPORATION.—The passing of any fluid body in steam or gas. Eva ation is always taking place, both in animal and vegetable bodies; in the former the process is called Perspiration, which see.

EVAPORATING LOTIONS are substances applied to the surface of the body to reduce the heat and quantity of blood in a part, by stimulating the vessels to row off their accumulation by exhalan, and, by the rapidity of the process, uce the heat. Ether, spirits of camr, and vinegar and water are among most effective of such agents.

EXACERBATION.—Provoking, sperating, becoming worse; a medical used synonymously for paroxysm. return of an ague fit is called its erbation. See Paroxysm.

EXANTHEMATA.—A medical term, the former classification of diseases, express those diseases whose visible cteristic was a rash or efflorescence the skin. See Measles, Scarlet ver, &c.

EXCISION.—A surgical term for the ting out of any diseased part: the is confined to the removal of the w joint or ankle, and portions of other .

EXCRETION.—Whatever is no longer iceable to the system is an excretion— refuse of all the solids and fluids of body. As *secretions* are the healthy of the system, from which the ent organs, parts, and tissues are tructed, the *excretions* are the *débris* waste of the whole. The excretions prise the evacuations from the bowels, urine from the kidneys and bladder, which may be added the gases exhaled the skin in the form of perspiration. Secretion.

EXERCISE.—Upon this subject we pose only entering so far as to show necessity there is for a due amount of cular exertion to insure the proper formance of the different functions, guarantee a state of bodily and mental lth; for as the action is so reciprocal ween the organism of the body and brain, it is impossible for one to be in a healthy or diseased condition ut producing a similar state in the er. Exercise is to the system what fly-wheel or the lever is to a piece of hanism—the sustaining power to the tive principle, which in the latter is , and the former respiration. Exere not only expands the lungs, supplying with an abundance of fresh and ulating oxygen, increasing the circulation, and enlarging every part of the body, but provokes the appetite, insures digestion, and keeps the bowels in a regular and natural action. Besides these benefits, the mind is not only maintained in a buoyant, cheerful state, but it stimulates every faculty to the highest condition of intellectual strength.

Though the importance of exercise is universally admitted, there are many thousands who believe that their compelled avocations prevent them availing themselves of so necessary a means of health. This, however, is a mistake; for though walking exercise in the open air is the best of all modes of exertion, yet all exercise should not be given up because the best form of it cannot be adopted. Persons so situated as to have no time for out-of-door exercise should make a gymnasium of a large room, and at least once in the twenty-four hours resort to it for recreation, health, and muscular exertion. Opening all the windows, and, if possible, removing the carpet, the individual should walk round and round, or lengthwise up and down, the apartment, at a brisk step for some time, say a quarter of an hour; he should then, removing his neckerchief, coat, and waistcoat, use the dumb-bells, in a line horizontal with his shoulders, for about ten minutes. These should be succeeded by practising his guards and lunges with a foil, making the opposite wall a target for his points; the quick recovery and rapid lunges in carte and tierce affording excellent exercise to the lower and upper extremities. The club evolutions, immediately following this, will call into play those muscles of the back, chest, and shoulders not affected by the dumb-bells. In this manner another ten minutes may be expended, which, after a second quick walk about the apartment, may conclude the exercise of the day. In this manner the deprivation of out-door occupations, and long sedentary employment, may be judiciously compensated for by about thirty minutes of daily exercise in doors. The advantage of this practice consists in the capability of its employment in all weathers.

Whatever may be the nature of the exercise, whether on foot or horseback, care should be taken never to undertake it *on an empty stomach*, or directly *after a meal*. The exercise of children has now very properly become a portion of their education, the only fault being that the times allowed for it and play are not sufficiently long to be of that service to their mental strength and bodily development which they might become. Play, next to food and air, is the natural stimulant of childhood, and boys can hardly have too much of it. With girls, dancing, the skipping rope, and battledore and shuttlecock, are occupations that may be carried into womanhood with more benefit to their health than a whole laboratory of physic could afford.

EXFOLIATION.—A surgical term applied to a diseased bone which has entirely, or in part, gone through the process of inflammation and mortification, and begins to throw off the dead scales, or *lamellæ*, which ultimately escape through the flesh by ulceration,—exfoliation signifying the casting or throwing off of a leaf. See Necrosis, and Mortification.

EXHALATION.—The vapour that is perpetually rising from all animal and vegetable bodies, and from the earth. The exhalations from the lungs and skin will be treated of under Perspiration, sensible and insensible, which see. Vapour to the amount of an imperial pint is supposed to be given off from the lungs in twenty-four hours.

EXHAUSTION may result from want of food, long fasting, fatigue, great heat, or great nervous depression, or from cold. The treatment of exhaustion must depend greatly on the cause which has produced it. When it proceeds from fatigue and great heat combined, an emetic of 30 grains of white vitriol will be found the most rapid and effectual means; while the exhaustion consequent on intense cold must be treated after the manner of suspended animation from Drowning and Frost-bites, which see.

EXOSMOSIS. See Endosmosis.

EXOSTOSIS.—A surgical disease, consisting of a tumour on a bone—either occurring on the surface of the bone, or between the bone and the fibrous membrane that forms its sheath,—and may be either fungoid or cartilaginous. In either case the cure can only be effected by an operation.

EXPECTORANTS.—A class of medicines whose operation is confined to the throat and air-passages. Expectorants are given to relieve some disease or affection in those parts, by promoting a larger amount of secretion, and thus unload the congested vessels of the organ affected. The most important expectorants are camphor, opium, benzoic acid, antimony, squills, tolu, calomel, ammoniacum, and ipecacuanha; and as external applicatio warming plasters, Burgundy pitch, an antimonial ointment.

EXPECTORATION.—By this term i understood the exudation and spitting ou of the mucus secreted in the throat an fauces. In a state of perfect health, th vessels about the pharynx and larynx ar constantly exuding a certain amount o mucus to insure the integrity of th organs, and which passes into the gull without thought or notice.

It is, however, only with that secretio that rises when disease takes place th we have anything professionally to d In such cases the character of the spu as it called, becomes of great consequence for every condition of what is discharg is a symptom, and shows the medical m the nature of the affection that causes i for the discharge may vary from a thi watery liquid, like saliva, to a toug leathery-looking phlegm, and from a je like mucus to a pure pus, or mat while each and all may assume ev variety of shade and colour, from a wh foam, to a green or blood-stained charge.

A *thin, frothy* expectoration indic influenza, bronchitis, or a common sev cold; when it is *stringy*, white, or yel the probability is that the bronchitis become chronic, or that hooping-cou has set in; when the expectoration becom purulent, but thin, it indicates a seri affection of the lungs or air-passages; when thick, and blended with *lu* *masses*, is a proof that ulceration of lungs is present, or some abscess in organ has broken.

When, again, the expectoration *stringy* and of a dull red or brick-d colour, it shows the presence of inflamm tion of the substance of the lungs, or pn monia, and so on with all the ot differences, each pointing to some dis or stage of mischief.

EXPIRATION. See Inspiratio

EXPRESSED OILS.—Such as c oil, linseed, palm, and some other See Oils.

EXSANGUINOUS, or EXSANG NEOUS.—Being without blood; bl less. A person is said to be exsangui when the face is pale and hollow, body cold, the pulse weak, and breat languid, from the sudden loss of a l quantity of blood,—as from wounds flooding in labour.

EXTENSOR MUSCLES.—Musc which extend or straighten a limb; t

nists to the *flexors*, which bend
bs or members.

TRACT.—A preparation of vege-
edicines in which the roots, stems,
s of a plant are boiled under certain
ons for a great length of time, then
d and evaporated to the consistency
y or a conserve. Extracts are all
rk brown, almost blackish colour,
ssess almost all the qualities of the
from which they are obtained,—
th, rhubarb, dandelion, henbane,
k, gentian, and belladonna, are
the most generally used. Some
s, by keeping, become hard and
; in general, however, they are soft.

RACT OF LEAD.—The liquor
. See LEAD.

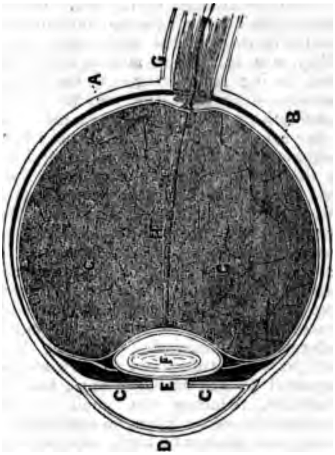
TRAVASATION.—Generally of
aused by the bursting or rupture
ssel, when the blood, pouring out,
t is termed extravasated on or
e adjacent parts. When, from a
n the head, or any other cause, an
l vessel is broken, the blood spreads
e brain, causing the injury already
of, called compression. In like
r, the giving way of a vessel on the
nay lead to an extravasation on or
lungs, causing congestion, or a
pulmonary apoplexy. The wheals
arks seen on the body from blows
cane, proceed from the same cause,
travasated blood causing the disco-
marks. The blood effused may be
from a vein or an artery.

TREMITY.—An anatomical term
g or arm. The subject is divided into
perior and two inferior extremities,
he head and neck, and the trunk.

UDATION.—Any humour oozing
discharged from a wound or ulcer.

E.—The eye and its appendages
one of the most complex and ad-
le mechanisms of the body, and,
from its function as the organ of
possesses so many attributes, that
tudy of the eye is regarded as one of
ost interesting in the whole science
tomy. The organ of vision consists
e eye and its appendages. The ap-
ges of the eye comprise the eyebrow,
pper and under eyelid, the eyelashes,
the lachrymal gland, and the lachry-
se and duct.

e eye proper consists of the globe or
f the eye, the optic nerve, and six
les to regulate its movements, named
ding to the direction in which they
the eye. Of these six, four are called
ht and two *oblique:* the muscle that
rolls the eye upwards is called the *levator oculi*, and its antagonist, situated under the ball of the eye, the *depressor oculi;* the muscle that turns the eye inwards is called the *adductor*, and its opposite, *abductor*, because it turns it outward. Of the oblique muscles, one is above and the other below the eye; the upper one passes through a small cartilaginous loop, and runs backwards before being inserted into the ball. This muscle, the *superior oblique*, is sometimes called the *trochlearis*, from passing through a loop or pulley, and sometimes *sympathetic*, as it is by the power of this muscle in rolling the ball obliquely outwards and downwards, that ladies are enabled to give that arch and inviting expression to the eye familiarly known as ogling; while the antagonist of this muscle, the *inferior oblique*, rolls the eye upwards and inwards. The ball of the eye consists of three investing membranes or coats,—inclosing two coagulated fluids or humours, which serve to distend these coats and give the eye its spherical form,—and the crystalline lens. The three membranes are named the *sclerotic*, *choroid*, and *retina*. The interior of the eye is divided into two chambers of unequal size—the anterior or smallest, which is filled with the first fluid, called the *aqueous*



SECTION OF THE EYE.

A, B. The three coats of the eye. C, C. Iris. D. Cornea, with the aqueous humour behind. E. The pupil. F. The lens. G. The vitreous humour. H. Artery of the lens; and G. The optic nerve.

humour: the posterior, and by far the largest chamber, is devoted to the *vitreous humour*. Each of these humours, or, as they are called, "waters of the eye," is contained in a separate and very delicate investment or sac.

Inserted into a groove in the sclerotic or external tunic of the eye, much in the manner of the glass of a watch in the rim of the case, is the *cornea*, horn, or what is sometimes called the window of the eye—a transparent, convex, laminated, talc-like substance, which, placed at the front of the globe of the eye, serves both to protect the delicate organization within the orb, and to transmit, as through a window, the rays of light to the seat of vision, the retina. Within the concave portion of the cornea, enclosed in a thin, delicate membrane, is situated the first—the aqueous or watery—humour of the eye. Immediately behind the aqueous humour, extended in rings of the most acute sensibility, is a curtain, or muscle, called the *iris*, having an aperture in the centre corresponding with the middle of the cornea, through which opening—the *pupil*—the rays of light are transmitted to the posterior chamber of the eye. So sensitive is the iris to the stimulus of light, fear, and the action of certain drugs, that it either expands or contracts in so rapid a manner as to give it the character of an involuntary muscle, as before the mind is conscious of the fact that excites it, the muscle has performed its action. According as the iris has been dilated or contracted, is the centre opening, or pupil, enlarged or diminished. When the flood of light is too strong, and vision would be impaired by the excess of rays, the iris contracts, reducing the pupil to the smallest diameter; when, on the contrary, there is an absence of light, as in a darkened room or vault, the iris is dilated to its uttermost, and the pupil greatly enlarged, so as to take in every straggling ray. This muscle is named the iris from the number of colours presented by its outward surface; and from the preponderance of any particular colour, persons are said to have black, blue, grey, or hazel eyes. The central aperture is named pupil, from *pupilla*, a very small child, because, if we look steadily in any person's eye, we shall observe a miniature resemblance of ourselves formed in this aperture, or pupil; or as Moore, in one of his early poems, has expressed it,—

"Thus in our looks some propagation lies,
For we make babies in each other's eyes."

Behind the iris, and directly in th centre of the pupil, is placed the *cryst* *line lens*, enclosed in a capsule. Th object of this mechanism is to collect in-focus, and transmit in a straight line to th retina, all the rays of light that fall on th cornea. By a system of extremely fi muscular fibres, the crystalline lens ca be protruded forward, or drawn back, thu like a telescope, adapting the eye to th nearness or remoteness of the object look at.

A fine membrane, called the hyalo divided into cells, and filled with t vitreous humour, fills up the whole po terior chamber of the eye, except a segme in front, where the crystalline lens a capsule lies embedded. The eye-ball th consists of three coats,—the external, *sclerotic*, giving shape and firmness the eye, and insertion to the vario muscles which move it; the *chor* middle, or vascular coat, in which circul the principal vessels which supply life a nutriment to the organ, the inner a outer surface of which is covered with dark brown kind of paint, called *pi* *mentum nigrum*, to absorb all unnecess rays of light, which but for this provis would confuse the vision; and the *reti* —this, though called a coat, is a mere pansion of the optic nerve, which, af leaving the skull and entering the orb expands in all directions, extending o the eye directly above the hyaloid me brane, inclosing the vitreous humour, a spreading, with the other two, as far as insertion of the cornea. Though a pur nervous investment, the field of obser tion of the retina is confined to a d extending for a short distance from centre of the optic nerve. It is on t disc, as on the table of a camera obsc that the object we see is reflected, and picture, so represented, carried to brain. That the trees, houses, and anim we look at are actually impinged or dra on the disc or retina of the optic ner and so remain traced on the optic sh till sponged out and replaced by a picture, has been satisfactorily prov and according to the intensity of the pression made by a singular or novel obj is the firmness with which it is drawn the retina. From the knowledge of the f that the last object on which the eye r in life can be traced for several days af death, and that any startling event is more firmly portrayed, it has been s gested to examine the eye of a murde man, to detect the features of him w struck the mortal blow. From the experiments already made, this subject is not only in itself highly interesting, but promises to become, at no distant date, a recognized fact in medical jurisprudence.

The *cornea* is the window by means of which light is admitted into the eye. The *aqueous humour*, being a denser medium than the air, serves to converge the rays of light entering the ball. The *iris* regulates the amount of light admitted to the *crystalline lens*, which collects and brings to a focus the rays passing through it. The *vitreous humour* serves the purpose of transmitting the rays of light to the *retina*, or the expansion of the optic nerve, where the object seen is impinged or painted. To enable the eye to glide in every direction without friction or impediment, a small gland is situated in the upper and outer side of each orbit; the constant and almost involuntary motion of the upper eyelid over this, the *lachrymal gland*, by the action known as winking, presses out, through a series of five or six small tubes, the tears secreted in the body of the gland, and which, diffused over the whole ball of the eye by the movements of the lids, not only wash the organ of all dust, insects, or impurities that get into the eye, but impart that liquid, glistening appearance so indicative of health and strength. When, from any injury to the organ, irritation from the presence of sand or insects, or from any emotional cause, an excess of tears is thrown out, the provision made for carrying them off becomes too small for the profusion, and, overflowing the eyelids, they run down the face and cheeks. When the quantity discharged, however, is only sufficient for the function and preservation of the organ, the tears never overflow, and though always exuding, are unfelt and unsuspected from the perfect mechanism by which they are discharged.

The tears, by the winking motion of the lids, having been carried over the eye, are conducted under the thickened ridge or margin of the lids, and beneath the eyelashes, to the inner *canthus*, or angle of the eye, where they are received through an opening into a short canal at the corner of each lid; these *lachrymal canals* uniting to form the *lachrymal sac*, which terminates in a small vessel which enters the nostril, called the *nasal duct*, by which means the tears are carried into the nose, and discharged into the back of the mouth. At the angle where the two lachrymal canals unite to form the lachrymal sac is situated a small fleshy excrescence—the *caruncula lachrymalis*—the surface of which is covered with minute hairs, often only visible by the microscope: any sand or impediment too large to enter the canals is entangled by these hairs, and, with a little white secretion, like pus, thrown out during sleep into the angle of the eye between the upper and lower lid. The use of the *eyebrow*, with the hairs which adorn it, is to act as a protecting eaves and thatch to the organ below, and, by projecting beyond the eye, receive any blow which, coming on the ball, might destroy its integrity. The *eyelids*, in addition to their acting as cases for the delicate sphere inclosed by them, and serving by their pressure and motion to lubricate the eye with the tears from the lachrymal gland, answer the purpose of blinds or curtains, either to be closed at night during sleep, or suddenly drawn down whenever too much light or heat or any danger threatens. The *eyelashes*, set in a row along the ridge of either lid, serve, by the motion given them by the lids, the purpose of brushes or fly-flappers, to entangle or dust away any small insects or particles of sand which may be blown towards the eye. Besides the muscles already mentioned as moving the ball of the eye, there are muscles to elevate and depress the eyelids, named in accordance with the action they perform. The thin, delicate membrane which lines the whole of the inner surface of both lids, the sides of the socket, and spreads over the globe of the eye-ball, is the *conjunctiva* or the *adnata*, and is so thin and transparent that the white surface of the sclerotic coat below it can be seen through; and from the vessels in it being too small to carry red blood, it preserves its pearly whiteness, except when, from inflammation, or the relaxation common to old age, the vessels become enlarged, when a few of them receive red blood, giving that appearance which we call bloodshot. See VISION.

EYE, DISEASES OF.—One of the most frequent diseases of the eye-ball is ophthalmia, of which there are many varieties, to be enumerated under Ophthalmia, which see. The iris and choroid coat are also subject to an inflammatory action, in which bleeding, purgatives, a low diet, and blisters are the most appropriate remedies, accompanied with cold applications to the head, and the confinement of the patient to a dark room. As in all such cases a medical man should be consulted, we abstain from giving a more explicit form of treatment. The same reason applies to that disease of the optic nerve known as Amaurosis, or *gutta serena*. For opacity of the crystalline lens see CATARACT.

The CORNEA is subject to a number of diseases,—such as specks, opacity, and abscesses; but as each form may require a different and very opposite treatment, the person should in all such cases at once place himself under the care of a skilful surgeon.

The EYELIDS. There are some diseases of the eyelids to which scrofulous children and adults are much subject,—such as thickening of the ridge of the eyelids, and the formation of small abscesses at the roots of the eyelashes, or in the Meibomian glands, as the rows of small glands in which the roots of the lashes are inserted are called. This thickening of the eyelids is almost always in a state of chronic inflammation, and generally attended with a bloodshot condition of the eye itself, and occasionally continues for months, either discharging a thick adhesive matter, or forming a succession of slowly suppurating abscesses.

The TREATMENT in these cases should commence with a complete change of diet, a system of alterative medicine, and a warm bath, before adopting the local means given below.

Alterative Pills and Mixture.—Take of—

Compound rhubarb pill	1 drachm.
Blue pill	30 grains.
Antimonialis	20 grains.
Extract of henbane .	10 grains.

Mix thoroughly, and divide into twenty-four pills: one to be given night and morning.

Take of—

Sarsaparilla root . .	1 ounce.
Dandelion root . . .	2 ounces.
Dulcamara	½ ounce.
Sassafras	½ ounce.

Boil in three pints of water, slowly, to two pints; strain, and give a wineglassful three times a day. After having used the pills and mixture for five or six days, a small piece of the golden ointment—red precipitate ointment—is to be inserted between the lids at the outer angle of the eye or eyes at bedtime, allowing the motion of the eye and the lids to diffuse it over the affected part; or a little may be taken on a camel-hair pencil, and spread along the affected lid, and this repeated every night, the eyes being washed with warm water in the morning, and the following lotio used once in the course of each day as a eye-water. Take of—

Sugar of lead . . .	6 grains.
White vitriol . . .	6 grains.
Water	6 ounces.

Dissolve, and make a collyrium, to l used daily. The chronic swelling of o of the Meibomian glands, to which chil ren are so subject, and known as a sty can always be cured by friction with t edge of the nail, the side of a ring, or l any means which will induce absorptio by stimulating the vessels of the part action. The popular treatment of gent passing a wedding-ring nine times o the stye is only absurd in respect of t necessity of a wedding-ring and the my tical number of three times three. T ring, to be beneficial, should be pres with its edge along the stye for twenty thirty times, twice a day: no child will l found to complain at the repetition, a as the object is to excite an action, so pressure must be employed to achie such a result.

EYE, SUBSTANCES IN THE.—Pieces of steel, and other bodies, often f into the eye, causing great pain; to remo these, draw down the lower lid with t fore finger of the left hand, and remo by a piece of moistened paper.

If the substance be under the upp lid, place a bodkin across the lid, a then draw it back, so that it is complet *inverted*, and remove in the same manne but as inflammation is very apt to occ after these accidents, the eye should b well bathed with warm water several time a day, and afterwards an eye-water ma be used, made of a drachm of alum to pint of cold water, two or three times day; or the following collyrium may b employed as a substitute.

Take of—

Rose water	8 ounces.
Extract of lead . . .	40 drops.

Mix: to be used two or three times a day

When particles of fine sand or dust g into the eye, causing heat and an exce of tears, an astringent eye-water, such a the following, may be used every five o six hours. Take of—

Sulphate of zinc . .	6 grains.
Elder-flower water . .	8 ounces.

Dissolve. In all cases where eye-wate are used, the eyeglass should be employe and the lotion allowed to flow over t ball of the eye, by first opening the lid and while the glass is pressed to the par gently moving it about.

F

The sixth letter of the alphabet,
as a numeral, signifies 40, and with a
rer it—F̄, 40,000. In medical pre-
ms, F. stands for *fiat* and *fiant*—let
em be made or done; as in the order-
pills, *fiat massa*, let a mass be made.
re other abbreviations, as in F. S. A.,
undum artem—let it be done, or
ccording to art; in other words, let
ecuted in a tradesmanlike or busi-
anner; and finally, F. stands for
as of the Royal College of Phy-
or Surgeons, F.R.C.P., F.R.C.S.,

E.—The countenance; the front
of the head, in which are situated
ans of sight, smell, and taste. The
composed of thirteen bones, ex-
of the teeth; these bones, with the
m of the lower jaw, are all bound
r, or in close connection with each
y sutures, or ligaments.

E ACHE.—The disease most ge-
understood by this term is that
and violent nervous affection
as Tic Douloureux, which see.

E, AFFECTIONS OF.—Under
ding are included those eruptive
, discolorations, and pimples of the
e result of impaired nutrition, or
anctional disorder of the liver.
N—DISEASES OF.

AL LINE, OR ANGLE.—A
ed in art, and is a means by which
ptor or phrenologist is enabled to
ne the elevation of the forehead.
facial angle is understood the
ntained within a line drawn from
st prominent part of the frontal
the gums above the incisor teeth
upper jaw, and another from the
foramen—the ear—to the start-
nt in the frontal bone, producing
e of about twenty-five or thirty

AL NERVE—ARTERY—VEIN.
ame given to the vessels supply-
rishment or sensation to the face.

ES HIPPOCRATICA, or Hip-
Face.—A particular expression
ountenance, which, after a long
mmediately precedes death; being
l as an infallible symptom or prog-
f approaching dissolution. This
expression of the countenance has been so called from Hippocrates, the first physician who gave an accurate account of this indication, and which he has done with a minuteness that the experience of twenty-three centuries has not been able to alter or improve.

The chief characteristics of the facies Hippocratica are, a sharp nose and contracted nostrils, the sockets hollow, and the eyes deeply sunk; pits in the temples, the ears pinched and cold, the forehead dry and wrinkled, the mouth open, and the countenance pale and livid.

FACTITIOUS.—Artificial; anything made by art, and contradistinguished from natural products.

FACTITIOUS DISEASES are those simulated disorders which artful recruits or street impostors practise to obtain their discharge from the army, or assume to excite pity and benevolence.

FACTITIOUS WATERS are those artificial saline waters, like Seidlitz, Harrowgate, and Cheltenham, made to imitate the natural spas.

FACULTY.—An ability or power to perform any action, as the faculty of virtue, memory, sense, motion, and of reasoning. The term is also used as indicative of the medical profession.

FÆCES.—The excrementitious contents of the bowels—the refuse of the food and aliment, from which all the nutritious particles have been extracted by digestion and absorption in their passage along the intestines; and sometimes called alvine discharges, or the *egesta.* The nature of the fæces varies materially both in health and sickness, and also according to the age: in a state of health they are of a moderate consistence, and of a light brown colour, owing to the presence of bile, and of a white and clay colour when the biliary secretion has from some cause been suppressed. These are the two extreme conditions of the fæces,—an excess or redundancy of bile producing a lighter and brighter colour, till they appear of a gamboge yellow; any diminution from the standard of a healthy proportion of bile being followed by lighter shades, till the excretion assumes the appearance of a whitish clay. Sometimes the discharge consists of mucous, tenacious lymph, or pure pus, as in cases of inflammation of the mucous membrane of the bowels, the nature of the discharge depending on the severity of the inflammation; pus being the result of the severest, and mucus of the lightest form of the inflammatory action. Sometimes blood is discharged, as in cases of internal piles; occasionally it is mixed with one of the other three discharges, as in dysentery. In mesenteric diseases, and some cases of impaired digestion, or hypochondriacism, the fæces are mixed with crude, undigested food. Children's evacuations are often both slimy and green; the former state depending on the presence of worms, and the latter very frequently from the action of mercury on the bile, when that drug is given in some form to children in their powders.

When the fæces are very dark, or black, the cause depends upon some change in the bile, unless the fact can be explained by the presence of iron in the medicine given; the smallest amount of that medicine striking a black with the bile almost immediately. In all cases of fever, particularly putrid fevers, the feculent matter is accompanied with a most offensive odour, as is also the perspiration, the breath, and every exudation from the body, showing the putrescent state into which all the fluids and solids of the body are converted.

FAHRENHEIT.—The name of a Prussian philosopher, who, about the year 1720, invented an entirely new scale to, and improved, the then existing thermometer. Fahrenheit fixed the freezing point at 32°, and the boiling temperature at 212°. This instrument immediately became popular in England, where it has since remained as the standard measure of heat. See THERMOMETER.

FAINTING, or SYNCOPE.—This affection, whether attended with a general or merely a partial insensibility, can hardly be looked upon as a disease, but ought rather to be regarded as a symptom of some organic or nervous derangement, a languid condition of the circulation, or a particularly sensitive state of the mind or imagination of the person; thus, many individuals in apparent good, indeed robust health, will faint and lose all consciousness at the record of a tragical event, the account of an operation, the sight of a rat, spider, or beetle; while others, again, cannot endure the smell of particular plants or flowers, becoming instantly insensible on the application of such to the nostrils. Even the smell of bread, or a rose,—one, the most necessary of articles, and the other the most delicious perfume in nature,—has been known to cause fainting and convulsions. One of the most noted generals of the 17th century, who had faced death in every form, was seized with trembling, a deadly pallor, and fainting, at the sight of an old woman.

SYMPTOMS.—These commence with a feeling of extreme distress; the eyes become dim, and are covered with a film; a singing noise is heard in the ears, the lips and face are white, a cold perspiration breaks out over the body, the memory fails, and the patient, if not caught, falls to the ground in a state of muscular relaxation. Sometimes there is a partial consciousness, the respiration being just perceptible, and the pulse small and tremulous; at others there is a total insensibility, and to ordinary observation, a perfect simulation of death, in which case, in weak or peculiar constitutions, should the patient not be roused by proper remedies in sufficient time, the *seeming* death may pass into the real.

In some instances the mouth and eyes are open, in others they are closed; but in all cases the limbs are flaccid, and the loss of power complete. A deep-drawn sigh, with or without sickness, always heralds returning consciousness and recovery.

TREATMENT.—In fainting, the consequence of nervous or physical debility, as in hysteria and the syncope of females generally, there is no cause for apprehension; loosening the clothes round the waist, laying the person in a recumbent posture, and allowing the air from an open window to play on the face, is generally all that is necessary, the patient usually recovering spontaneously after a few minutes. A little cold water sprinkled on the face, and hartshorn applied to the nostrils, may be employed when necessary, or a few drops of sal volatile and spirits of lavender in half a wineglass of water may be given; or burnt feathers, Eau de Cologne, or aromatic vinegar, may be substituted for the hartshorn to the nostrils.

In cases where it is necessary to use despatch to restore the patient, and where a long continuance of the insensibility might be dangerous, the circulation should be roused by bottles of hot water to the feet, and by employing friction to stimulate the heart. Many persons effect this by slapping the hands and chafing the temples.

Whether the fainting fit is the result of simple debility, or proceeds from organic disease of the heart, as soon as the recovery is complete, such remedies as the history of the case may justify should be employed prevent, as far as possible, a recurrence the fit. See Hysteria.

FALCIFORM.—Scythe or hook-like. process or fold of the dura mater, one the lining membranes of the skull, and hich, hanging down, divides the two mispheres of the brain. See Brain.

FALLING SICKNESS. See Epi- psy.

FALLOPIAN TUBES.—Two vessels nnected with the womb, one being situ- ed on either side, and terminating in a abriated or fringe-like process. It is thin these tubes that the *ovaries* are uated, for their function in the female dy. See Womb.

FAMES CANINA.—Wolfish or dog- e appetite; ravenous and diseased ap- tite. See Bulimia.

FAMINE.—Starvation, which see.

FARINA.—The meal or flour of any real grain, root, or other substance used r food, as flour, oat, pea, and barley- eal, &c., from whence we derive the word rinaceous, a term applied to any vege- ble preparation which contains farina.

FARINACEOUS FOOD.—Many pre- rations for the diet of children and valids are prepared and vended under is name, some consisting of baked flour, owdered biscuits, semolina, pea-meal, rowroot, or powdered lentils; some of em simple, others composed of two or ore of these articles intimately mixed.

Hard's Farinaceous Food, Polson's Corn lour, and the Revalenta Arabica, are some the most celebrated of the articles ended for this purpose. See Food, and fants, Food for.

FASCIA.—The name given to a surgical ndage. Also an anatomical term, ap- lied to the fibrous expansion, sometimes alled *aponeurosis*, which invests, as in a elicate sheath, the muscles. The term is lso applied to some broad ligamentous xpansions.

FASTING.—A deprivation of food, ither voluntary or involuntary.

A voluntary deprivation of food is sometimes adopted as a remedial means to facilitate the cure of certain diseases, and there can be no doubt that if a system of judicious fasting were more regularly prescribed as an agent in the practice of physic, it would be attended with great benefit to the sufferer, and advantage to the profession. Though in fevers and inflammatory diseases a judicious fasting is highly advisable, in a state of health an improper abstinence from food is most in- urious, and when persevered in, as is sometimes the case, from mistaken motives, the consequences are very hurtful, especially when the body is in active employment. For it must be remembered, the stomach, like every other organ of the body, performs its function through the virtue of the stimulus of the blood appertaining to it; if, then, the blood is allowed to circulate without receiving from the stomach the reward of its service—the nutrient principle from the food—the nerves, no longer excited by vigorous blood, refuse their vital energy to the stomach, which consequently becomes torpid in its action, and other organs participating in the general loss of tone, indigestion and debility ensue, and the whole frame suffers. On this account, unless adopted or prescribed with the object of curing disease, fasting should never be rashly adopted, or the stomach left for more than five or six hours without food. See Digestion.

FAT, or Fixed Animal Oil. — This formation, so necessary to the healthy organism of the body, is a substance generated in the system by the conversion of fibrin and albumen into adipose tissue, and though fluid in the living, becomes solid in the dead body.

The use of fat is of the utmost importance to the health of the body, as being one of the chief agents in the generation of heat, and will be more fully treated of under Food, and the section of heat-giving aliments. It is on account of this important use that all hybernating animals become fat during their season of activity, and so emaciated when rousing from their period of repose, or hybernation, the adipose tissue having become absorbed during their sleep to keep up the combustion by which animal heat is generated. Besides supplying fuel to this vital chemistry of the blood, fat performs many other services in the animal economy; it is deposited between the crevices of the muscles, and is equally diffused over the surface of the body, between the flesh and the cuticle, giving that exquisite roundness to the frame which imparts such symmetry and beauty to the bodies of all young persons, and to the absorption of which in advanced life we owe those hollows, cavities, and wrinkles, so antagonistic of beauty, observable in old age. The accumulation of fat in certain parts of the body, in considerable quantities, is another provision of nature to form resistant cushions to such parts, which, if unprotected by this contrivance, would be exposed to injury, or great inconvenience. Without the depth of adipose tissue deposited over the posterior muscles of the thighs and hips, and over the soles of the feet, we should neither be able to sit for more than a few minutes without pain, if not danger, nor could we walk for any distance without suffering. These fatty pads, acting as shields to the muscles and network of nerves and arteries, supply them with life and sensation. Fat also lubricates the joints and tendons of the body, and, in the same manner as the grease applied to the axles of locomotives and vehicles, allows the bones to play in their sockets, and the muscles to glide over each other without waste, danger, or friction. And, lastly, fat adds to the specific lightness of the body, gives an elasticity to the frame, and assists in keeping the body from sinking when immersed in the water. Thus it becomes evident that a certain amount of fat is actually necessary to the well-being of the body, and where such articles of diet as in the laboratory of the system are converted into fat, as starch, sugar, or gum, are not taken in sufficient quantities, the want should be compensated for by the person consuming a due proportion of oleaginous matter with his animal food; hence the desirability of eating ham or bacon with veal or chicken —meats whose muscular fibre is almost devoid of fat. See FOOD. In some constitutions, the power of eliminating fat from any kind of aliment amounts to what may be called a diseased action, for the adipose tissue is generated in such abundance, that the body often becomes, even in youth, overlaid with fat, producing that state of corpulence called obesity, rendering the body sluggish and unwieldy, and materially interfering with the healthy function of the oppressed organs. Sometimes this deposition of fatty matter is internal only, and goes on without displaying any outward sign of excess, slowly accumulating round some organ; and when that is the case, it is generally at the sacrifice of its structure, the organ, as a consequence, becoming seriously endangered.

The amount of fat necessary to health varies with the climate—the lower the temperature in which a man lives the larger the amount of oleaginous food required, from the simple fact that the colder the air the more fuel will be required for the combustion in the lungs; thus, at the North Pole, the quantity of unctuous matter consumed can hardly be too great, while at the tropics it sinks to a minimum proportion. It is upon this principle that oleaginous substances insure a full and perfect oxidation of the blood, and a free respiration, that the milk, and suet, and cod-liver oil are recommended as highly beneficial in consumption and affections of the air-passages. For the diseases generated by excess of fat, see OBESITY.

FATUITY.—Mental weakness. See IDIOTCY.

FAUCES.—The back of the mouth, and the commencement of the pharynx, extending from the tonsils and uvula to the root of the tongue and the epiglottis, and sometimes called the gorge. The fauces is often the seat of inflammation in severe colds, for which gargles, fomentations, and blisters are sometimes prescribed. See *cuts* to DEGLUTITION and DIGESTION.

FEAR.—This operation upon the mind is often, if uncorrected, attended with the most serious consequences where sickness is present or disease expected. On many persons the influence of fear is far more serious in its effect than the worst form of the dreaded malady. In all epidemic diseases, particularly plague and cholera, the terror inspired by either scourge has been quite as fatal as the infection; paralysing the system, and robbing the body of the natural elasticity of its nervous stamina, and the mind of the buoyancy of hope, making voluntary victims of those who, from age and strength, had the best probability of escaping. There are few medical men who have not had cases of small-pox, where the patient, by his own alarm, has produced the disease, and where no direct contagion to excite it was possible.

On this account, both the surgeon and the friends should exert themselves to tranquillize a patient's fears, and endeavour, not by ridicule, but by a calm, cheerful conversation and argument, to disabuse the mind of the dread entertained either of a threatened disease, or, if attacked, of the consequences of it, for unless a more hopeful tone, and a moral reliance, can be instilled, *no medicine*, however specific, will have a chance of affording aid to the invalid, or giving credit to the practitioner. Fear is a mental poison, and the most potent of all antagonists to health and medicine; and as *faith* has cured more diseases than physician ever prescribed for, so *fear* is more destructive than the worst form of contagion.

FEBRIFUGE.—A medicine to drive away or dispel fever. As fevers are cured by several classes of medicines, the list of febrifuges would be very numerous, and embrace articles from the mineral, vegetable, and animal kingdoms, and comprehend tonics, stimulants, emetics, diaphoretics, purgatives, and diuretics. The term, however, should properly be confined to such substances as exercise a direct and specific action on the chain of morbid actions which constitute the disease. The remedies that approach nearest to such a result are the cinchona and a few other barks, arsenic, and quinine, the last the best and only reliable agent of that kind. See Fever.

FECULA.—Starch. A fine, powdery substance, obtained from almost all vegetable substances by being treated with water, but yielded in greatest abundance by the flour or meal of all farinaceous substances, potatoes, &c. If a little flour is beaten in a basin under the tap from a water-butt, a tough, greyish substance, adhesive as birdlime, will be left in the whisp, and a fine powder will at the same time be precipitated to the bottom of the basin; the first is the *gluten*, the other the *fecula*. See Starch.

FECUNDATION.—The making fruitful or prolific; a term used by physiologists to imply the impregnation of the germ, or *ovum*, whether of the human or the lower animals; the commencement of the process of gestation, or breeding. This subject, and all that relates to it, however important and interesting in a scientific light, more properly belongs to the physiologist than the physician; and though many remarkable changes occur during the process, having a great effect on the health and condition of the female, all that is necessary for the ordinary purposes of utility will be taken notice of under Pregnancy, which see. Those who desire more information must consult the works of Majendie, Fletcher, Quain, and other anatomical and physiological writers.

FEEDING BOTTLE.—A flat glass bottle, used for the convenience of rearing infants by hand, the feeding bottle being made to answer the purpose of an extemporised breast, or reservoir of food, from which, by means of a nipple, the infant imbibes its nutriment. The feeding bottle is made of white glass, flat, of an oval shape, about eight inches long, with a wide round hole on the upper surface for the admission of air and the contents with which it is filled, also to enable the bottle to be more completely cleaned; while to a small neck and aperture at one end is affixed the nipple from which the child draws the food, the bottle being held in the hand.

A new artificial nipple, made of India rubber, both white and black, has of late years been introduced, and largely patronized for these bottles, and feeding apparatus of various kinds have been brought out, called biberons—all very neat and elegant, but generally rather too expensive for a poor man, to whom a child who has to be reared by hand is often an actual misfortune; while in point of economy, usefulness, and cleanliness, nothing can be better than the old-fashioned bottle and calf's teat, prepared in the manner stated below. The advantage of the calf's teat, when properly prepared, over the best artificial nipple is so evident, that there can be no comparison; for, in appearance, feel, and consistency, it exactly resembles the nipple of the parent, and, properly attended to, will last for several weeks. They are easily procured at any chemist's, where they are preserved in spirits, and sold at the rate of 4d. or 6d. apiece. When purchased, the teat is to be washed in a little warm water, turned inside out, pressed between the fingers to expel the spirits from the texture, returned, and allowed to remain in soak in fresh water for a few hours if not immediately required. The bottle having been washed, the nipple, after pressing out the water in a cloth, is to be drawn over the nozzle of the bottle, and firmly tied by a few turns round the neck by a piece of thin twine, care being taken to leave only about an inch, or an inch and a quarter, for the child to suck from, for if made too long it may get into the infant's throat, and cause it to retch; the superabundance remaining next the bottle is then to be cut off. The bottle is now to be filled with water, and the clearness of the aperture tested, by milking the water out with the thumb and finger, or by sucking it through the lips. When satisfied with the proper working of the nipple, and that all smell of the spirit has been got rid of, the bottle is to be half filled with the necessary food, and then turned nipple downward for a minute or two in a jug of warm water, to bring it to the same temperature as that of the food within before placing it in the child's mouth. For the proper food for such bottles, and the mode of preparing it, see Infants, Food of.

The method best adapted for keeping the food warm during the night will be found under the same heading, or Night Lamps, which see.

FEES, MEDICAL.—The remuneration given in this country to physicians is quite a matter of opinion or generosity, there being no law to regulate the scale of charges. The physician's office, legally considered, is an honorary one; he cannot, therefore, according to the spirit of his diploma or degree, make any charge either for his time or his professional services. He is thus placed entirely at the mercy of his patient; but though he can neither demand a remuneration nor recover by legal process his fee, prescriptive custom has given him a power that is considered quite as efficacious as judicial right, as no one would dream of sending for a physician unless prepared with a guinea to slip—as if it was an act of dishonest compromise or a demoralizing bribe—into the hand of the departing and seemingly unconscious doctor.

The customary fee for one visit of a physician in this country is a guinea, though some medical men contrive to get it known among those likely to employ them that their *honorarium*, as the physician somewhat pedantically calls his fee, is two guineas, for which he is in the habit of throwing in a second visit without charge; others, again, accept one guinea for the first visit, and half a guinea for each subsequent attendance; and some, whose practice lies among the poorer orders, are content with half guinea fees in all cases. Though one guinea may be taken as the standard remuneration for single visits, there are several fashionable physicians who would consider themselves ill paid with less than five, and among certain classes that sum is the ruling price through the illness, with frequently a douceur, in the form of a cheque, at the termination of the case.

Most physicians are in the habit of receiving poor patients at their own houses at certain hours every morning, when, according to their reputation, it is well known their fees are alike to all comers—from one to half a guinea. As the proportion who can afford to give fees is very small compared to the mass of afflicted people, and as only a very few of those who can give an *honorarium* can afford to repeat the process, a large body of physicians find themselves reduced to a very limited number, as after one fee the majority of patients have to subside into the care of the general practitioner. The struggling physician, jealous of the host of clients enjoyed by the apothecary compared to his few and far between visitors, has of late years adopted a system by which he seeks to preserve the dignity of his physician's *status*, and at the same time secure some of the benefits belonging to the general practitioner. For this purpose, numbers have given themselves a double qualification, and in addition to their degree as M.D., take their diploma as M.R.C.S. and L.A.S., or Members of the College of Surgeons, and Licentiates of the Apothecaries' Society, — licences which enable them to act, not only as physicians, should a guinea patient come by, but as apothecaries and general practitioners, where they can make an honest charge for their labours.

The ordinary remuneration of the general practitioner is by compensation for his drugs; the law allowing the medical man to send in such an amount of medicine as, at an average price, shall pay him for his one, two, or three daily visits, the skill shown being quite secondary to the time of the medical man. Though no actual price is fixed by law for mixtures, lotions, pills, or powders, so many trials have occurred on the subject that the prices may be considered fixed: the jury, however, will always look at the condition of a patient, and the time he was ill, and square the expense of the doctor's bill with the man's means, and what is regarded as an honest charge for the drugs and time of the doctor.

Unless the patient is wealthy, and the visiting was heavy, and could not be paid by the sums charged daily for medicine, the law does not allow a charge to be made for attendance when the amount for medicine is deemed sufficiently remunerative; he may, however, charge, and will be always allowed, for all surgical operations, such as bleeding, tooth-drawing, application of a bandage or caustic, as well as for dislocations or fractures. Thus mixtures are generally charged up to 2s. 6d. for each bottle; a draught, from 1s. to 1s. 3d.; a lotion, from 1s. 6d. to 3s. 6d. a quart; pills and powders, 3d. each. If a medical man has sent medicine to the amount of 5s. a day, he would not be allowed to charge for his attendance also; but should the medicine fall to half-a-crown, he may charge his professional visit as 3s. It is quite at the option of the patient to make what conditions he pleases with his medical adviser, y paying him for his advice, and having he drugs compounded himself, the surgeon riting the prescription. In such cases, a poor man 2s. 6d. or 3s. 6d. a day ould be a fair amount for the surgeon.

Bleeding and tooth-drawing, occurring uring an illness, are generally charged from 1s. to 2s. 6d., according to the eans of the patient; cupping, from 5s. 7s. 6d.; a night visit, 5s.; and reducing fracture or a dislocation, unless the hip int, from one to two guineas. For these ms, however, there should be no second arge for after application, bandages, or anything done subsequently to the part. In cases of compound fracture the arges are higher; but for a simple acture or dislocation, unless the pulleys e used, or much trouble incurred, one two guineas is a handsome fee, and to k more for tightening the bandages uring the cure is extortionate and njust.

The fee for vaccination is from 1s. 6d. 5s.; but as every man gets paid by overnment as well as by his patient r vaccinating a child or adult, 7s. 6d. 10s. 6d., the sums formerly charged, ave become absurd: lancing the gums, om 1s. 6d. to 2s. 6d.; and, finally, the e paid in midwifery cases depends ntirely on the circumstances of the arties requiring the doctor's aid. Whatever the time may be, the fee varies from ne to two guineas, paid as soon as the abour is over. Some medical men attend ases for less than this, but then charge xtra for every draught or visit paid efore the actual time. Whatever the um undertaken may be, nothing can xcuse the ungentlemanly conduct of harging a farthing for any medicine or service rendered during the confinement, uch conduct being mean and unprofessional.

FEIGNED DISEASES.—The factitious diseases or complaints, deformities and accidents, which our street impostors are in the habit of manufacturing, are far more numerous than persons would readily believe. The art with which these mendicant artists make themselves up for a day's begging is something wonderful, and so cleverly, nay, ingeniously, are their distortions and frightful burns painted and manipulated, that nothing but that test which few have the courage to adopt—the contact of the hand—can sometimes detect the cheat, the police themselves being often at fault, nd unable to prove the imposition.

It is, however, in simulating fits, especially epileptic seizures, that these vagabonds are the most artful and successful in their results; their convulsions, agonies, struggles, and contortions being so admirably imitated, that it requires a shrewd, experienced surgeon to detect and expose the impostor. Such fellows generally select a busy and fashionable neighbourhood for their performance, or fix on the front of some large mansion where ladies are near the window, pretty certain that brandy and water will be forthcoming before he need come out of his fit, besides the probability of a shower of sixpences to enable the poor exhausted wretch to obtain medical advice for those frightful fits that seem to tear the sufferer to pieces. The probability is, that the artful hypocrite will call on the ladies next day to beg a sixpence from every maid in the house to make a silver ring for his left hand (the sovereign remedy for those afflicted with epilepsy); and as the charm would be destroyed unless he *begged* the money, and received it only from the hand of a maid, the good Samaritans generally send him from friend to friend, to enable the cheat to amass enough to make the needed talisman.

These scoundrels generally select a soft place—the ground instead of the pavement—for their fits; they are also chary of knocking their heads on the stones; and though they kick and struggle, roll their eyes, distort their features, and foam at the mouth to admiration, they neither bump their heads nor bite their tongues, as the true epileptic does. These, therefore, are strong evidences of the trick that is being played; while a little of the foam, of which they always have a wonderful amount about their mouths, if wiped off and placed to the nostril, will show by the smell that it is being manufactured from a piece of yellow soap under the tongue.

There are two means which, if properly carried out, will never fail to cure the impostor of his fit, and bring him to with wonderful celerity. This is for some gentleman to order the bystanders to strip both arms, then call for a wash-hand-basin, that he may take a couple of pints of blood from the poor man; or asking a servant to bring a kettle of boiling water to pour over the feet and legs, to relieve the patient's brain. Either of these plans will prove infallible, the impostor seldom stopping to express his gratitude for the kind intention.

The feigned diseases in the army, however, exceed anything written in the way of the marvellous. Soldiers, to obtain their discharge, have assumed the most extraordinary diseases and combination of diseases, and though watched for weeks, and subjected to the most rigid tests, and sometimes the most cruel torture, have borne the most trying physical pain without the quivering of an eyelash, or a deeper inspiration to note their suffering. Blindness, deafness, catalepsy, fits, and hæmorrhage, have been among the most frequent fictitious diseases practised by the recruit and soldier to obtain exemption from service. Fortunately such cases are now rare, a better order of men serving their country than those who, half a century ago, composed the bulk of the British army, and we may, therefore, be spared a record of the means then thought justifiable by military surgeons to detect imposture.

FEL.—Gall, which see.

FEMOR.—The thigh; *os femoris*, the thigh bone, and longest round bone in the body. From the same word we have *femoral*, as the femoral artery and the femoral vein, the two principal vessels of the limb. See Thigh, and Leg.

FENESTRA.—The Latin for a window, though anatomically the word is used for two apertures in the stony portion of the temporal bone appertaining to the internal ear.

FENNEL (commonly called Sweet Fennel, and botanically known as the *Fœniculum vulgaris*).—A warm, aromatic, stimulating plant, growing common in this country, and cultivated in our gardens on account of its agreeable aromatic odour. Fennel is sometimes used as a sauce, or a substitute for parsley and butter, chiefly for fish—mackerel and salmon.

Medicinally, fennel is used as a carminative in cases of colic or flatulence, and as a diuretic, though its properties in this last respect are rather doubtful. A cordial water is distilled from the plant, and an essential oil is obtained from the bruised seeds.

FERMENTATION.—A most important process, to which most animal and vegetable substances are liable, and during which the component elements of which the article consists are decomposed or separated, and new compounds formed out of them.

Formerly only three kinds of fermentation were recognized, but chemists now acknowledge five forms of this process, three of them being sequent, one following the other. The *first* is the saccharine, when, by the fermentation of starch, sugar is obtained; the *second*, or the vinous, when sugar is converted into spirit; and the *third*, or acetous, when the fermentation proceeding farther, the spirit becomes vinegar. If a piece of fresh sugar-cane, full of syrup, or the sweet sap, is exposed in the sun of the tropics for half an hour, it will have passed through the second fermentation, and if tasted, will be found like champagne; and if the remainder of the juice is exposed in the same manner for a short time longer, the sap will have become excellent vinegar, having passed into the third or acetous fermentation. It is from the application of these processes that we finally obtain alcohol and vinegar. The *fourth* form of fermentation is called the pannary, or bread fermentation; this is a mere modification of the vinous or second process. The *fifth*, or putrefactive fermentation, is that sweltering of decayed animal and vegetable substances which results in the giving off of noxious and offensive miasms and gases, ammonia often being the product.

FERMENTED LIQUORS.—Ale, porter, cider, perry, mead, metheglin, and some other beverages, obtained by the process of alcoholic fermentation, are among the most important of the liquors coming under this denomination. The term malt liquor is sometimes employed to express the first two of these in its restricted sense, though in its fuller acceptation whiskey and gin may be included under the same denomination. Of the antiquity of these beverages it is unnecessary here to speak, as such facts will be mentioned more fully under the head of Malt, which see.

FENUGREEK.—A strong, aromatic plant, with a hard, brittle seed; has a powerful smell, and yields a pungent essential oil, exercising diuretic properties; for which purpose it is used extensively as a horse medicine, either given in the form of a powder of the seeds, or as an essential oil in diuretic balls.

FERN, Male and Female.—This species of fern, common to all waste grounds in England, and known in pharmacy as the *Aspidium filix mas*, is a plant that, in the days when the Pharmacopœia consisted chiefly of herbs and roots, was held in great veneration as a beneficial agent in many disorders, the male variety being exclusively confined to the cure of diseases in the male, and the female variety ually reserved for women,—serious or a total loss of action being ed to a mistake in the exhibition roper species to the wrong sex.

one action, however, is now ed to the fern plant—that of an intic or vermifuge (a drug for the worms), and for such a purpose no question as to the efficacy of it. Male fern is either given as r—the powder of the dry root— decoction of the herb or fresh In either case the dose should ated for five or six days in suc- and then followed by an aperient according to the age of the or a dose of castor oil, to carry dead worms and slime from the and then, more effectually to the alimentary canal of the im- engendered by these parasites, lay or two of rest, the fern should ated again for a series of days, as before by an aperient in some shape.

ern, whether given in powder or n, should always be administered the morning, at least two hours reakfast. The dose of the pow- ern is from ½ a drachm to 2 , and of the decoction from a onful to a wineglassful. See

RO-CYANIC ACID.—This l poison and chemical compound osed of cyanogen, oxygen, and d forms, with salts, preparations as triple prussiates, or ferro- ; it is a species of prussic or anic acid, and Prussian blue is a this triple nature. See Hydro- Acid, and Prussic Acid.

RUM.—The Latin for Iron, which

ULA ASSAFŒTIDA. — The ceutical name of the gum-resin ida, which see.

ULA PERSICA.—The name of of gigantic fennel growing wild ia, and distinguished by its rank ensive smell, and only of conse- from yielding the resinous gum *agapenum*, a mild kind of assa-

R. — A disagreeable odour, a the consequence of putrefaction. m is generally confined to the gases given off from decom- , the result of inflammation, as of sloughing or mortification unds and injuries; also from the decay of the teeth, or a depraved state of the stomach, tainting the breath, when the person is said to have a fœtid breath; and also from the exhalations given off from the mouth and body in typhus or low putrid fever; and finally, in cases of salivation, where the breath becomes highly disagreeable from the absorption of the mercury.

FEU VOLAGE.—A species of mild erysipelas or erythema; a red rash, called by the French *feu volage* (from its fugitive character), or flying fire. See Skin, Diseases of.

FEVERS.—A class of diseases in the classification of human ailments comprehending the most important of all the complaints to which flesh is heir.

Fever is the result of a diseased or impaired action of the system, and is characterized by shivering, languor, weakness, thirst, loss of appetite, increased heat, quick pulse, debility or relaxation of the limbs and joints, and general disturbance of all the functions of the body. The causes of fever are as numerous as their names, and as varied as their symptoms. All fevers, however, are of two kinds: *idiopathic*—such as rise from the system itself, or spontaneous and symptomatic; or *sympathetic*—those that are induced by some other disease. Fevers are divided into three *genera*—1st, continued fevers; 2nd, intermittent fevers; and 3rd, remittent fevers. In the first are included inflammatory, nervous, or typhus, and mixed fever; in the second, the quotidian, tertian, and quartan intermittent fevers, or ague; and the third consists of the marsh, remittent, and yellow fever. The ages at which people are most liable to fevers are from 20 to 30, and as respects sex, females are slightly more liable to be attacked by them than males. All fevers are not infectious, but those which are so are communicated by *contact*, exposure to the atmosphere surrounding a fever patient, or from whatever cause, that by weakening the body, predisposes the person to infection. The best preventative against fever or infection is cleanliness, occupation, and cheerfulness.

The treatment of fevers generally requires bleeding, if adopted in the first stage, and the patient is young and of temperate habits. Emetics are almost always necessary, and should be employed early in the attack, and may often be repeated with signal advantage. Purgatives, particularly saline, are always necessary, and from the beginning to the end of the disease may be used with a certainty of benefit in every stage. Blisters and cold lotions are frequently of signal service in fevers, particularly in inflammatory fevers.

Besides the constitutional fevers already noticed, there are other varieties—some general, others local—as Hectic Fever, Eruptive Fever, Puerperal or Child-bed Fever, Peritoneal Fever, Pleurisy, &c., for which, with the preceding three *genera*, see each under its respective head. See also Paroxysm, Critical Days.

FIBRE.—A filament, or thread, the minute part of either animal or vegetable substances. The woody part of plants, or vegetable fibre, is only curious in a scientific light; but animal fibre is a subject of importance, and a necessary theme for this work.

All flesh, or muscle, consists of an immense number of minute longitudinal threads or animal fibres, called filaments, bound into bundles of fibres, and all intimately united into one homogeneous whole, constituting a muscle.

The primitive form of all muscular tissues is that of a *filament*—a long, straight or waving thread of flesh, like a hair; many thousands of these filaments bound together into a bundle are called a *fibre;* a vast number of these bundles, or fibres, are in their turn bound into a larger bundle, called a *fasciculus*, or parcel; while according to the size of the muscle depends the number of these fasciculi, which finally bound together constitute the perfect muscle. See Tissue.

FIBRINE.—One of the proximate principles of all animal and many vegetable substances, and generally existing in conjunction with albumen—the two being closely analogous in their constituents, but differing in their properties.

Fibrine not only exists in the blood, forming with the red globules what is called the *crassamentum*, or clot, but it constitutes the whole of the muscular tissue. Fibrine is not soluble in water, but spontaneously coagulates when drawn from the body, the fibrine involving all the red globules of the blood as it cools and forms the clot. The fibrine found in such abundance in wheat-flour, and other vegetables, is called *gluten*, to distinguish it from animal fibrine, though both are precisely alike. As a nutritive agent, fibrine is of great importance in the animal economy. See Food.

Fibrine is of a whitish colour, without taste or smell, tough and elastic, is decomposed by heat and nitric acid, is eminently nutritious, and contains a large proportion of nitrogen. It is upon the proportion of this organic principle contained in any substance—animal or vegetable—that the nutritive quality of that article depends.

FICUS.—A Fig, which see.

FIFTH PAIR, or Trifacial Pair of Nerves.—The largest, and one of the most important set of the cerebral nerves. See Nerves.

FIGS.—A well-known and very nutritious fruit, growing in great abundance in the north of Africa, Greece, on the shores of the Levant, Asia Minor, and Syria generally, though the finest are those brought from Smyrna and other parts of Turkey. The medical properties of the fig are laxative and refrigerant, the pulp being the part most digestible and beneficial.

The figs brought to this country are first dried in a furnace, or by the heat of the sun, then dipped in a scalding ley, flattened with the fingers, and packed closely in round boxes called drums.

The wood of the fig-tree resists decomposition for a long time, on which account the ancients were in the habit of using it for coffins for their mummies. In some countries the fig-tree is so prolific, that it bears three crops in the year: a peculiarity of the fig is, that the fruit always precedes the leaves. As a cooling and refreshing aliment, figs are remarkably wholesome, and alone, or stewed, form an agreeable laxative.

FILAMENT.—The primitive form of all animal tissue—a thread, a fine muscular hair—an indefinite number of which bound together constitute a *fibre;* a congeries of fibres similarly bound together forming a *fasciculus;* and a series of fasciculi comprising a *muscle*. See Fibre.

FILBERT.—This well-known species of the hazel nut, greatly esteemed for its sweet and luscious kernel, is, on account of the oil it contains, extremely nutritious, though frequently indigestible with persons of weak stomach. In all cases, however, nuts of all kinds should be eaten with salt. See Nuts.

FILTER.—A vessel to purify water, and one of the most valuable and necessary appurtenances of the domestic economy; for no one who has a due appreciation of the blessings of health, and desires to use the bountiful and universal solvent of nature in a state of purity, would consider

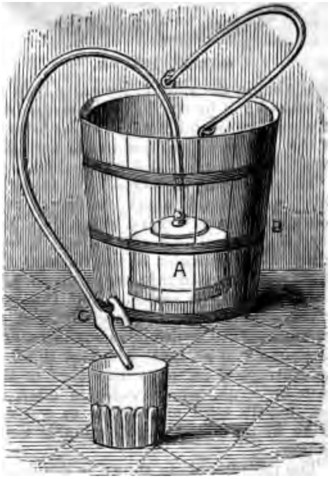
ic establishment perfect unless
the possession of some means,
rude, of correcting the water,
to health and ablution, of the
l contaminations with which in
ry case it is loaded.

st all the waters used for do-
poses are drawn from rivers or
y are consequently deeply im-
with both animal and vegetable
a state of decay, and impurities
inds, rendering them extremely
ble as a beverage, unless pre-
iled or filtered; and by the first
water is very often rendered
sipid.

portance of pure water, like
ilation, is now generally allowed,
one who has a true regard for
l consider it as one of the most
items of domestic comfort. To
n a slight degree the amount
egetable pollen, animal ova, and
débris held in solution in the
daily consumed, we need only
the tank or water-butt which
reservoir of the household, and
w, with every attention to clean-
a short time its sides and bottom
aded with weeds and matter of
bjectionable nature. The water
urposes of ablution ought to be
that with which we assuage our
ooking at this subject in a me-
sanitary light, and one of para-
nsequence, we purpose giving
as of filters, by which the desi-
f pure and wholesome water for
purposes of life may be always
n the highest perfection.

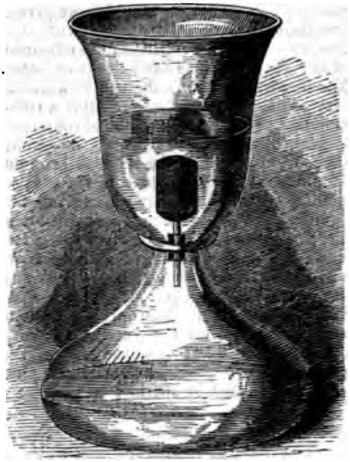
of some sort have been in use for
, till latterly, none of them have
tructed on purely scientific prin-
Filters made of layers of well
nd of different kinds, firmly im-
earthenware or other vessels,
r being allowed to percolate
them, were for a long time
he best, and—because this con-
mitated the manner by which
urified by passing through sand
h—the most natural process.
l in time becoming foul, and
the water, was improved upon
g stones and fragments of char-
the sand in different layers, and
perior kind of filter was supposed
en obtained. Sponge next came
ation, and being very closely
ogether, was thought to have
the end in view, and again a triumph was thought to have been obtained. All of these, however, possessed the same fault,—the water only passed *between the particles* of the sand, not *through* them, while in every case the filter soon became foul, and often extremely offensive.

The best of all these mechanical filters was that, the principle of which we give a practical sketch of in the annexed cut—the Porous Stone Filter. This can be obtained of any shape or size to suit tanks or butts. The illustration shows the use to which it may be put on a small scale. B is a common pail or bucket, at the bottom of which is placed the filter, A, with a flexible tube, C, attached to the top and brought over the side. The pail is then filled with water, and the person sucking the mouthpiece of the tube, to exhaust the air, has only to bend it down to the glass, into which the water will then flow, and continue to run pure as long as any fluid remains in the pail, the tubing thus acting as a syphon. The only precautions necessary are, that the vessel to receive the water must be below the level of the pail, or reservoir, and that the longest part of the tube must be outside.



THE POROUS STONE FILTER.

Clever and useful as this apparatus is, Atkins and Son, of Fleet Street, have brought to perfection a system of carbonaceous filtration which, for portability, effectiveness of its object, and domestic convenience, far surpasses anything we have yet seen. By means of these carbon filters, a chemical, or rather galvanic, action is established during the process, the carbon acting on the gases in the water, and, by reversing their polarity, neutralizing the sulphurous gases held in solution; and by the fact that every drop of water *percolates through* the substance of the carbon, a fluid is obtained perfectly sweet, limpid, brisk, and transparent.

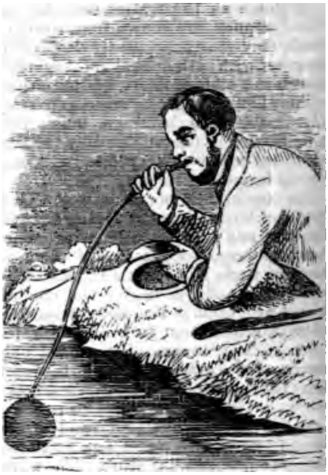


GOBLET FILTER.

The second cut shows the Table Filter on this principle, the upper, or funnel part containing the carbon and water, the under part a goblet, being the receptacle into which the pure water distils through the small pipe inserted into the mass of prepared charcoal or carbon. But the contrivance to which we especially wish to recommend the notice of our readers, and particularly of all those who may think of emigrating, is an apparatus that in the bush or scrub, where water is often so loaded with sand, and so bad as scarcely to be fit for use, is an invaluable companion.

The instrument as shown in use in the following cut, fully speaks for itself as to its utility. A small sphere of carbon, to which a gutta percha tube and mouthpiece is attached, comprises the whole invention, with the exception of a tin box in which to carry this unique Drinking Filter.

The merits of this little filter, however, do not end here, for it can be made to answer the purpose of a family filter by merely sinking the carbon in a pail of water placed on a table, exhausting the air from the tube, as in the first cut, bending it over the side, and inserting the mouthpiece into a jug placed on a chair, when the stream of filtered water will continue to flow as long as any remains in the pail. See WATER.



SUCTION FILTER.

FILTRATION.—The process of straining, whether through flannel, leather, or paper.

FIMBRIA.—A fringe. An anatomical word, applied to a number of loose, fringe-like processes, terminating the fallopian tubes.

FINGERS.—For any information connected with these members, see HAND.

FIR.—One of the most generally useful of our European trees. There are many varieties of the fir common to this and more northern countries, independent of deals for household and building purposes. The products of the fir family most useful in a medical sense are Rosin, Turpentine, Tar, and Vinegar (which see), and Pine.

FIRE-DAMP.—The name given by miners to the noxious vapour, or inflammable gas, found in coal-pits, mines, and subterranean places, and which, rushing suddenly from some fissure in the seam or lode, and coming in contact with the light, instantly explodes with a fearful noise, igniting the brattice, mine, and all with which the leaping flame comes in contact, producing a frightful sacrifice of life and property. It was to protect the collier from this, his most dreaded danger, that Sir Humphry Davy invented his miner's safety lamp—an apparatus that, by covering the flame of the lamp by a screen of fine metallic gauze, prevented all contact with the light, while the illumination from the flame was very little impeded.

Fire-damp is a carburetted hydrogen gas, similar in all respects to the gas used for lighting our streets and houses. Fire-damp is an explosive and inflammable gas, while choke-damp is a non-inflammable gas that extinguishes flame, and destroys life by causing a contraction of the gullet, from whence it derives its name. See Carbonic Acid Gas.

FIRST INTENTION.—A surgical term to express the method of healing a clean cut wound by simple adhesion, or the growing together of both lips or sides of a smoothly cut part, when the edges of the wound are placed in even contact, and retained so, either by stitches, adhesive plaster, or a simple bandage. So rapid and effectual is the process of healing by this form, that with even cuts the only dressing necessary, after placing the edges in their place, is to bind up the unwashed part as it is, and leave it undisturbed for a few hours, according to the length and depth of the cut, till healed.

Healing by the *second* intention, as surgeons call the opposite principle, is when a wound or injury, from loss of substance, has to be closed and healed by the formation of new granulations springing up from the bottom, and by the contraction of the surrounding parts. See Wounds.

FISH.—As an article of human diet, this order of food has been divided, by physicians, into three kinds,—fresh water, salt water, and shell fish. Fish, as a general rule, is easy of digestion, light, and nutritious. These properties, however, are possessed in different degrees by different fish, and by the different orders; thus, fresh-water fish generally is both less palatable and less nutritious than the salt-water variety, which is the most so, while shell fish with one exception, that of oysters, as a general rule, is most indigestible. Of fresh-water fish, trout and tench are the best, and eels, from the large amount of oil they contain, the most objectionable, unless, indeed, the stomach is in full and vigorous action. Of salt-water fish, the most beneficial, both on account of their digestibility and nutriment, are turbot, whiting, haddock, sole, plaice, flounder, and skate, and that, too, nearly in the degree in which they stand. Salmon, the richest of all fish, is only so far nutritious as the stomach has power to digest it.

Fish is admirably adapted for invalids, from the absence of all exciting or stimulating properties, from its lightness on the stomach, its easy digestion, and nutritive quality. The chief excellence of fish, as a diet, consists in the abundance of albumen contained in every species, especially those salt-water fish just named. On this account, the best mode of cooking fish is by boiling. Where fish proves hurtful to the stomach, it generally proceeds from the sauces which are taken with it—the melted butter, shrimps, or parsley or fennel—causing flatulence and indigestion, faults seldom the result of the fish when eaten simply. See Food.

FISSURE.—A surgical word for a crack or split, either occurring naturally or by the force of accident, as in cases of fracture of the skull.

FISTULA.—The Latin for a reed or pipe; a surgical name for any diseased tubular or burrowing passage, the result of some morbid change induced by inflammation and suppuration, the matter, if deep-seated, working its way under the muscles and forming a tunnel-kind of passage, when it receives the name of a fistula; and when less perfectly formed, that of a fistulous passage or opening.

There are two surgical diseases to which the name of fistula is particularly applied. These are,—*fistula in ano*, and *fistula in perinæo.*

Fistula in Ano.—This disease, as its name implies, appertains to the lower portion of the bowel, and consists in a long, pipe-like opening, extending from the muscles of the hip, or gluteal region, within an inch or two of the anus, and burrowing through the muscles and cellular tissue, terminates eventually some 2, 3, or 4 inches up the bowel or rectum.

The consequences of this disease, when fully developed, are most offensive and harassing, as the more liquid portion of the feculent matter of the bowels is always oozing or being forced through this fistulous canal, causing immense personal distress and great pain and exhaustion.

Causes.—The causes of fistula are long sedentary habits, sitting in a wet place, or exposure to wet for a length of time, especially when occurring in a scrofulous constitution.

The *symptoms* of fistula are very uncertain, the disease being seldom suspected till the evil has reached its worst condition: sometimes it commences in the bowel, when there is no means to anticipate the mischief, till it breaks through on the external muscles of the buttock; at other times it commences from without, like a common pimple, being thought little of by the patient, till, after some weeks of inconvenience, the true state of the case is at last discovered.

Treatment.—This, though painful, is remarkably simple, and consists in introducing a blunt-pointed bistoury into the fistula, till its point comes out in the bowel, which fact is proved by the finger of the other hand being passed up the rectum, till it touches the blunt point of the instrument, when, the finger being hooked over it, both are brought down together, the parts being cut through as the knife descends, till finger and bistoury escape together at the divided anus. A piece of lint is then inserted into the wound to prevent a union of the cut side of the fistula, and thus compel it to heal from the bottom, by the *second intention*, so that the pipe-like nature of the disease may be obliterated, and the tunnel filled up with fresh granulations. Sometimes it is necessary to use a stimulating lotion to effect this, after the operation; but generally the mere cutting, the introduction of lint, and rest, is all that is necessary,

Fistula in Perinæo.—This fistulous disease is connected more or less with the bladder, in which the opening takes place, either in that part of the integument lying between the anus and the pelvis, called the *perinæum*, or else into some part of the urethra. The treatment of this disease, however, depends so much on the direction of the fistula, that it would be impossible, if advisable, in the space at our command to enter upon so complicated a subject. Fistulas sometimes occur in connection with the lachrymal sac, or nasal duct; but here, as in all other diseases of this nature, a surgeon should be consulted, as relief can only be obtained by an operation. When the fistula is not complete—that is, when there is not a definite *exit* as well as entrance—it is called a blind fistula, or *Sinus*, which see.

FITS. See Fainting, Convulsions, Hysteria, Epilepsy.

FIXED or DEPHLOGISTICATED AIR.—A term used by chemists for an atmosphere deprived of all its inflammable elements, and consequently incapable of combustion. Another name for Choke-damp, or Carbonic Acid Gas, which see.

FLATUS.—Wind, air, gas; the gas generated in the stomach and bowels, and called

FLATULENCE.—An unnatural amount of wind in the stomach and bowels, generally the result of indigestion. When the quantity of gas generated is very considerable, it leads to the disease known as Drum Belly, or Tympanites, which see.

Flatulence most frequently results from using a preponderance of vegetable food in the dietary, such as turnips, potatoes, cabbage, and similar aliments. As flatulence is but a symptom, its treatment can only be undertaken by removing the cause that excites the primary disease; for this purpose, see Indigestion.

As a means of present relief, a few grains of carbonate of soda in a wineglass of water; 20 drops of sal volatile in a little aniseed water; or an assafœtida pill, will almost always afford relief; or if preferred, a teaspoonful of Dalby's carminative, or a tablespoonful of Daffy's elixir, may be substituted. When the flatulence arises suddenly, and is attended with pain and oppression at the stomach, a teaspoonful of Gregory's powder in a little peppermint water may be taken every four hours, till the flatulence is dispelled or the pain subdued.

FLESH.—Muscle, animal fibre; one of the solids of the body, chiefly consisting of fibrine and albumen. For the aliments that produce flesh, see Food.

FLESH-BRUSH.—An article of domestic utility, made of different degrees of resistance, and either hard or soft, used as a sanitary agent to cleanse the skin, open the pores, and promote perspiration when used in the bath, or with soap and water. When employed in a dry state however, it acts as a counter-irritant, and in this way, in cases of bronchial or pulmonary affections, when freely used, night and morning, over the neck and chest, acts most beneficially in relieving the oppression of the lungs.

Flesh-brushes are made of various textures, according to the degree of irritating friction the person can bear; but whether constructed of canvas or horsehair, the material is of less consequence than the mount of friction obtained from it; and o that end, a good huckaback towel, pro-erly folded, may be made quite as effec-ive as the best flesh-brush ever invented. n cases of consumption, paralysis, rheu-natism, and chronic affections of the liver, he use of this useful little agent, either ry or in the bath, is most beneficial.

FLEXOR.—The name applied by ana-mists to a muscle which bends a limb or part. There are a great number of exor muscles in the body,—such as those f the arm, the forearm, hand, fingers, c.; so also of the thigh, leg, feet, and oes. The flexor muscles are antagonistic o the extensor.

FLINT, SILEX, or SILICA.—A mineral bstance entering into nearly all the egetable aliments. For the use and pro-erties of this article, see FOOD, and ILICA.

FLOCCI VOLITANTES.—Flying otes or flitting specks; such motes as a atient, in certain affections of the brain r eye, believes he sees flashing before his ision—the consequence of an excess of lood in the eye or brain.

FLOODING.—Uterine hemorrhage. hough the term flooding is generally onfined by medical men to that excessive ischarge of blood from the womb which ollows a severe or protracted labour, the erm is yet occasionally employed to ex-cess uterine hemorrhage at any time, rom the commencement to the termina-ion of gestation. Flooding generally ccurs within half an hour of the birth of he child, and before the separation of the fter-birth; or at any time from the first tage of labour to the safe removal of the lacenta. As the *treatment* in cases of looding is very different when it takes lace *before* delivery, to that when it ccurs after delivery, we must reserve he treatment of this alarming form of emorrhage to the subject of Labour, hich see, and LABOUR, PREMATURE.

FLOUR.—The powder of wheat, after he grain has been ground and dressed, or olted, or separated from the chaff, bran, nd pollard. For its properties as a nutri-ive aliment and a heat-forming food, see FOOD.

FLOWERS OF SULPHUR.—The Powder of Brimstone, or Sublimated Sul-phur, which see.

FLUCTUATION.—A surgical term, ndicative of suppuration, or a collection f fluid matter; the motion felt under he fingers when a proper pressure is stablished over a swelling, when an examination is made to discover its nature: if pus or water is present, a fluctuation is perceptible, but when air or wind, the sensation is of a crackling nature, called *crepitus.*

FLUIDS.—In the human anatomy, the fluids of the body exceed the solids in the proportion of nearly three to one: the average weight of an ordinary human body being 154 lbs., one hundred and eleven pounds of the whole are water, or fluids, and forty-three pounds the weight of the solids.

The fluids of the body are divided into the aqueous and the sanguineous; or into the circulating and the passive, or stagnant: appertaining to the circulating are the blood, the chyle, lymphatic fluid, and the secretions; and to the other the bile, pancreatic juice, and the urine.

FLUIDS, DISINFECTING.—Fluids to neutralize and destroy bad smells, foul odours, and noxious exhalations. See LIME, CHLORIDE OF; CHLORINE, and TIN and ZINC.

FLUMMERY.—A kind of porridge, or hasty pudding, made either with oatmeal or flour. When prepared with the former, the finest oatmeal is to be steeped for two or three days in cold water, this first water is then to be poured away, more water added, the whole well stirred together, then strained, and the fluid eventually boiled with a little salt till it thickens; it is then eaten like porridge, either with milk, milk and cream, sugar, or butter: in whichever way taken, flummery makes a very excellent food, at once light and nutritious.

FLUOR ALBUS.—A mucous discharge from the vagina and uterus; the whites. In general this is an affection the result of weakness, general and local, and should be treated by cold bathing, the douche, friction with the flesh-brush, tonics, wine, and an astringent lotion used as an injection. See UTERUS, DISEASES OF.

FLUOR SPAR.—A well-known mineral, generally called Derbyshire spar, or Blue John, from that county, yielding a large quantity of this material. Fluor spar consists of lime and fluoric acid, and is largely used for chemical purposes, and also employed in the arts generally.

FLUX.—Any severe alvine discharge, such as diarrhœa, dysentery. The bloody flux was a name formerly given to a very dangerous kind of dysentery, to which the negroes, in "the middle passage," were very subject. The term is now almost obsolete.

FLY, BLACK, OF AUSTRALIA.—This small and venomous insect is a source of very great annoyance in some portions of Australia, causing considerable pain and inconvenience by its bite, particularly on the face. The best prevention is to wear a veil over the face; and where that is not practicable, washing the skin with a decoction of quassia will effect the purpose, the bitter principle of which effectually keeps the enemy at a distance.

A little eau-de-Cologne, lavender water, or extract of lead is a good and expeditious remedy to apply to the bite or sting of these troublesome little insects.

FŒTUS.—The name given by anatomists and surgeons to the human embryo, from the first development to the period of quickening, or the fifth month. See Uterus.

FOLLICLES. — Extremely small secreting glands, situated chiefly beneath the cuticle, where they secrete an oily fluid, which, by a series of minute vessels, is poured through the skin to be diffused over the surface. This system of secreting organs is called the sebaceous follicles.

FOMENTATION. — The application of hot fluids or moist heat to any part of the body, for the purpose of relieving pain or promoting suppuration. Fomentations are composed of decoctions of plants, roots, or herbs, or of simple hot water, or are poultices made of meal or flour. When liquids are used, the best article to apply the fomentation with is a piece of folded flannel, or a length of Piline, which see.

FONTANEL. — The name given by medical men to the anterior opening in the infant's head, between the frontal and parital bones. See Infants.

FOOD.—The articles which the human stomach has the power of converting into wholesome aliment embrace almost every substance in nature, and belong equally to the animal, vegetable, and the mineral kingdom. Food is either solid or fluid, and is in all cases taken with a twofold object—to supply heat to the system, and repair the waste and expenditure of the body.

Before the properties of certain aliments constituting the food of daily life can be properly and satisfactorily understood, it will be necessary to show how nearly or remotely they approach in their elements, or proximate principles, to the constituents of the frame they are meant to restore and nourish. The human body consists *of solids and* fluids, in the proportion (with an average body of 11 stones) of 43 lbs. of solid matter, and 111 lbs. of fluids, making up the average estimate of 154 lbs. Chemistry, in revealing to us the mysteries of the human frame, and detecting the principles of every tissue and organ, has conferred an immense boon on medical science, and given us a synopsis that teaches us the elements most conducive to health, and in what aliments to find them.

The materials with which the body is built are those substances which render our foods nutritious and valuable; and however unctuous and tempting a meal of roast beef, cauliflowers, and French roll may be, divest the one of its glue, and the others of their lime, soda, and flint, and the repast would become actually hurtful. That we may estimate the quality of our food, not by the savour and attraction of the viand, but by its *flesh*-producing and *heat*-generating properties, it is necessary that every one should know what constitutes the really nutritious principles of our aliment — those substances which make bone and muscle, nerve and fibre—the fluids and the solids—the real stamina of the living body. The articles which effect the several changes to produce this one result are—*lime*, such as the phosphate, carbonate, and fluoride; *soda*, in the form of sulphate, carbonate, chloride, and phosphate; *potass*, as sulphate, chloride, and phosphate; *magnesia*, phosphate; *silica*, and *iron*, as a peroxide. Thus, to enjoy perfect health, a person has to consume the most opposite and apparently most incongruous of articles, among which may be enumerated fluor spar, glauber salts, manganese, iodine, phosphorus, salt, glue, albumen, flint, soda, potass, and many other substances, equally singular and seemingly absurd.

A thorough knowledge of the chemical constituents of the articles forming the catalogue of our daily aliment is an absolute necessity, as far as the perfect health of the system is concerned, and is a desideratum that every cook or the mistress of the household should possess, if she regards the physical welfare of her family.

In selecting the various items of meats, fruits, and vegetables which are to constitute the chief repast of the day, how seldom, if ever, does the person entrusted with that duty pause to inquire whether the viands selected contain those salts and elements so necessary to the proper ealth of the body, and the absence of hich, when persisted in, induces *rickets* i the young, *gout* in the aged, *scrofulous alformations* in delicate girls, and *palpitions* and a train of nervous affections in others and matrons. Strange as these lections may appear to some, they are t the less true; for if articles are put to the stomach deprived of those saline inciples which should be eliminated m them by digestion, the blood becomes poverished from the absence of such bstances as are necessary to its integrity, d as a consequence, every organ and action of the body becomes impaired, akened, or diseased by the defective anization of the blood.

One of the most erroneous ideas enterned on food is the belief that the nutrint of an article depends on its richness, the due admixture of tender flesh and . Now the nutritive principle of one t of foods is *carbon*, or the great feeder combustion, and of the other *nitrogen*, azote, the animalizing principle of all sh. It is generally believed that, as imal substances contain a large proporn of nitrogen, they must of all foods be e best for aliment, for flesh-producing rposes. This, however, is a mistake, as re are some vegetables that yield nigen in much larger quantities than any imal fibre. It is not, then, the amount animalizing principle or nutriment in article that makes it nutritious or proible to the system. The great art of trition, as far as health and physical velopment are concerned, depends on a per *variety*, or mixture of animal and etable substances eaten for food, and a t and perfect digestion of what is en.

Man is an omnivorous animal, as we e before taken occasion to observe, a t indicated by the number and conration of his teeth. This circumstance nts out the necessity of his living on a ed *diet*, and the injudicious policy of tricting the system to an exclusively mal or vegetable regimen.

To one aliment, however rich in anilizing principle, be it animal or vegele, will support life for any length of e, if either man or dog is subjected to xclusive use. In all cases where pers have been confined to one food, a dition analogous to *scurvy* has been ced, succeeded by emaciation and lity, till a state of perfect mirasmus inated the experiment by starvation death. A few raw cabbage leaves given in the worst of these cases would have quickly altered the whole aspect of the case; the salts of potass, lime, and soda yielded by the crude vegetable would have given the vital principle to the blood it required, the food would have been converted into healthy chyle, and the emaciation given place to a robust state of body.

DIVISION OF FOODS.—All articles of food are divided into two classes; those *containing* nitrogen, and those in which nitrogen *is wanting*, or substances containing carbon, hydrogen, and oxygen. The first comprises all animal foods of every kind—except oil and fat,—and a few articles of the vegetable kingdom, such as wheat, beans, peas, barley, oats, turnips, rice, and potatoes, with pears and apples. And the second, which embraces the greater part of the vegetable kingdom, and the fats and oils. The former are called flesh-forming, and the latter heat-forming foods.

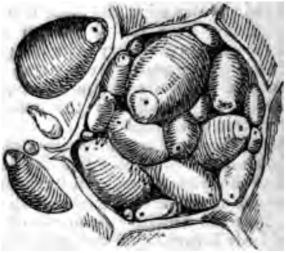
HEAT-FORMING FOODS.—The carbonaceous, or combustible, as this group of foods is called, from the fact that they contain large quantities of charcoal, or carbon, and are consumed in the system, being, in fact, the *fuel*, from the burning of which we obtain our animal heat. As many persons may be unable to recognize the meaning of such terms as combustion, burning, and fuel in connection with the human body, it will be necessary to explain our meaning of these scientific terms at once, and in this place; the more so as they relate to a vital function, which, unless properly performed, would impede every other function of the body.

Though no charcoal is actually swallowed, and there is neither flue nor grate in the animal system, yet a fuel exactly analogous to charcoal—carbon—is eliminated or extracted in the stomach from certain kinds of food, and carried by the blood to a stove and chimney—the lungs and windpipe—equal in effect to the best fireplace ever heated, and where the caloric generated is in every respect as perfect and sensible as that obtained by combustion from any domestic stove. The process by which this combustion is effected is called respiration. The carbon obtained from the food is carried to the heart in the chyle, there mingled with the impure blood, and sent to the lungs, where the blood coming in contact with the air inspired, the carbon attracts the oxygen from the air, and is instantly converted into carbonic acid, heat—but at that temperature not light—being generated and thrown out at the moment of union. The carbon, which was a harmless fuel a moment before, no sooner mingles with the oxygen than it becomes a *deadly poison*, called by colliers, when it occurs in mines, choke-damp, and chemically, as we have said, carbonic acid gas, which, as soon as it is liberated, passes up the flue of the windpipe, and by the mouth and nostrils escapes from the body. Any one doubting the poisonous nature of this carbonic acid has only to place a mouse, or some small animal, in a decanter, and breathe a few times upon it, to satisfy himself, by the rapid death of the animal, of the fatal nature of this human exhalation.

From what has just been said in respect of heat-forming or carbonaceous foods, it will be seen why a person fed exclusively on a diet from which *no carbon* can be extracted, such as animal or nitrogenous substances, is certain to decline and eventually perish, For if no charcoal is taken into the system, the inexorable fire-place of the lungs, which will to the last perform its duty, draws from all quarters of the frame the carbon so necessary for combustion, till at length, the blood and all the other fluids exhausted of this element, the fire begins to burn fainter and fainter, less and less heat is given off, digestion is arrested, emaciation follows, and when the lungs have consumed the last atom of carbon, the fire is extinguished, and life and heat expire together. Similar results follow an opposite style of conduct. A person fed exclusively on one carbonaceous or heat-forming article, and one free from all nitrogenous principle, would decline in the same languishing manner; for though there would be no falling off in the amount of fuel, or in animal heat, the blood corrupted by an excess of carbon, and the absence of the salts necessary to its healthy state, would lead to a total prostration of power, a corruption of all the humours, which, by producing a species of scurvy, would, after a short time, result in a catastrophe quite as fatal as the former.

The folly of attempting to live exclusively on one system of diet will be now apparent, and the necessity there is, if we wish to live naturally and healthfully, for a *mixed diet*, and of giving to the body articles from which it can extract substances similar to those of which its tissues *are composed.*

The articles belonging to the heat-forming aliments are the food of the stomach and the fuel of the lungs, so much being converted into nutriment, and so much into heat. Whatever may be the nature of the articles appertaining to this class of foods, they all resolve themselves in the stomach into three principles,—*starch*, *sugar*, and *fat.*



POTATO STARCH—GRANULES.

Starch—not the substance used for domestic purposes, but the flour of all dry vegetables—exists in the form of granules, but so minute as only to be made visible by high microscopic power. The granules of each plant differ in shape and size, but yet those of every plant are so *universally alike*, that the vegetation from which it comes may be known by the character of the granules of its starch. Starch, though diffusible in water, is insoluble in it, and it is from the application of this knowledge that starch is so easily obtained from potatoes, and other articles, by washing in water. Starch consists, chemically, of *carbon*, *hydrogen*, and *oxygen*, the two last in the proportion that constitutes water, so that, proximately, starch is composed of carbon—or charcoal—and water, the charcoal being as 12 to 10 of the water, or the whole mass. Now, as carbon *cannot be digested*, and as it can neither pass through the blood to the lungs to be consumed, nor add to the nutrition of the body, till it has been digested, and as starch is equally indigestible, nature, that nothing may be lost once taken into the body, converts the stomach into a laboratory, and the starch is resolved into sugar, which is soluble, the stomach adding 2 atoms more of water to the 10, making the product, carbon 12, water 12, which are the exact proportions of sugar. Thus, all the starch taken into the stomach, from whatever plant, is by the water from the

erted into soluble sugar, which
asses into the blood, to form
imal heat, and nutriment for
of the body. Though starch
in cold water, boiling water
operty of converting it into a
inous mass. After the potato,
which yield the most abundant
starch are arrowroot, sago,
e, wheat, oats, &c.; but the
ration of starch which has yet
d to the public, and at the same
nost pure and efficacious for
rposes, is an article called
r, manufactured by Messrs.
Polson, and sold for invalids
, and in which, owing to the
which it is made (the gluten
llard being carefully removed),
arch is left behind, admirably
r the purposes already stated.
TS, and INVALIDS, FOOD OF.
r, it should be observed, is the
e Indian corn, or maize.

T—MARANTA ARUNDINACEA.

h is a heat and not a flesh-
d, it should never be given
y, or alone as an aliment, but
ccompanied by some substance
rogen to the system. All the
l both mosses and sea-weeds,
, and are used as foods, but
ive properties are almost pro-

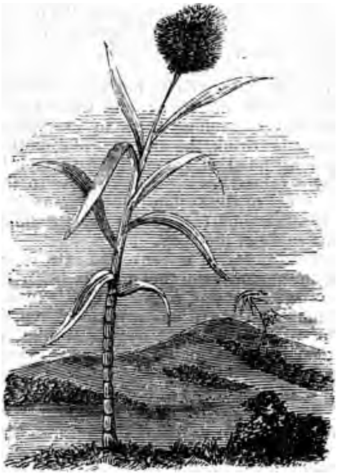
Sugar.—Before proceeding with the second article in the list of heat-generating foods, it may be advisable to repeat that all substances of an animal or vegetable nature constituting food are composed of four gases, *oxygen*, *carbon*, *hydrogen*, and *nitrogen*. As a general rule, however, all vegetables are composed of *three gases* only—carbon, oxygen, and hydrogen; and on the same general rule, all animal substances consist of *four gases*—the three above, and nitrogen. There are exceptions, however, to both of these rules; some vegetables contain nitrogen, and some animal formations are destitute of nitrogen, or the animalizing principle. The exceptions to the first we have already referred to, as in all leguminous plants, potatoes, apples, mushrooms, &c., while the exceptions in the animal kingdom are the articles known as fat and oil. These four principles are therefore not only the bases of all alimentary foods, but constitute the elements of nutrition; and we are perpetually consuming them in everything we eat or drink, the processes of digestion and assimilation recombining them into those substances most serviceable to the economy of the system, according as they support combustion or develop the fluids and solids of the body.

Though starch is converted into sugar in the stomach (by that process resolving an ineffective and insoluble article into a soluble and nutritious substance), and is the product of most vegetable matter, sugar is often found to exist in a free state in the same plant with starch, being found in the juices or sap of the vegetable.

Sugar contains the same elements as starch, only in different proportions, and is found in considerable quantity in wheat, barley, and oats; lentils, beans, and peas; beet, carrot, and sweet potatoes, though in the last two there is no accompanying starch. In fact, though sugar may be obtained from ash, maple, maize, and a host of vegetable substances, fruits, trees, and roots, it is from the sugar cane that this widely diffused and invaluable article is generally procured. See SUGAR.

Sugar is not alone confined to the vegetable kingdom, for it is found also in the animal secretions, especially in those of milk. The value of sugar, as an article of diet, over starch, lies in the facility with which it can be absorbed into the blood; and its value as a food is shown in the universality with which it is supplied by nature to the young of all the higher animals in the milk of the mother. Its sweetness always recommends it to the tastes of children, to whom at all times its free use as a food may be recommended.

From its proneness to fermentation, however, sugar, as a general article of dietary, is less calculated to act beneficially on *adult* stomachs, where it is apt to form compounds inimical to health and the function of digestion. On this account, sugar should be avoided by all persons suffering from, or liable to, dyspepsia, gout, or rheumatism; at the same time, the corpulent, or the obese, should not only refrain from sugar, but from starch, and all articles containing the elements which compose sugar.



SUGAR CANE.

Fat, Oil, &c.—Under this head of heat-forming foods are included all varieties of suets, marrow, butter, oils (animal and vegetable), and grease of every kind. To understand more clearly the chemical composition of the above various articles of diet, it will be necessary in the first place to recapitulate the components of starch and sugar, the former consisting of —carbon, 12 atoms; hydrogen, 7 atoms; oxygen, 3 atoms; or their equivalent, water, 10 atoms: sugar being composed of carbon, 12 atoms, and water, 12 atoms. If we now look to the chemical condition of fat, we shall find it to consist of—carbon, 11 atoms; hydrogen, 10 atoms; and oxygen, 1 atom. The point observable here is that the hydrogen and oxygen are no longer in the proportion to form water, that there is a large increase of hydrogen; and a very small proportion of oxygen. The consequence of these proportions is, that instead of half the product, as in sugar or starch, being carbon, nearly the whole mass becomes combustible material. All fats and oils are extremely inflammable, and, on account of the hydrogen they contain, burn with a broad flame. To understand how oils and fats, which are insoluble in water, are dissolved in the stomach, mixed with the chyle, and taken to the heart, the lacteal vessels themselves being too minute to carry such bulky particles as those of oil, we must premise that all fats and oils are composed of two parts—*stearine* and *oleine*—the first solid, the other liquid. Stearine, which is the base of all fatty matters, consists of an acid and a base, the one called stearic acid, and the other glycerine, or *lipyle*. Nothing that will not dissolve in water can pass through the lacteals, or be taken into the blood, and as all oils and fats are *insoluble*, the stomach once more performs a chemical action to render them soluble and fit for the function of the absorbents, and this is finally effected by converting them into *soap*, which, as is universally known, is very soluble in water. Soap is made by boiling fat or oil with potass or soda, the alkali uniting with the stearic acid, forming a stearite of potass or soda soap, according to which alkali is used; the glycerine being liberated. A process exactly analogous to soap-making takes place in the stomach, or duodenum, by the bile, which contains a quantity of free alkali, and the pancreatic fluid, converting the oily part of the food into a soapy compound, which then becomes soluble, and can be absorbed. See GLYCERINE.

That fats are most important agents in the combustion of the lungs is shown in the fact that the colder the climate in which a man lives the greater is his consumption of fatty matters. The amount of oil or blubber which a Russian or Esquimaux will dispose of at one meal is something extraordinary. So necessary is this stimulating food in cold or Arctic regions, that our own sailors, in their explorations of the North Pole, require a much larger quantity of fat than is requisite for health at home. To supply them with this necessary article, a preserved food, called pemmican, which contains 80 per cent. of fat, is one of the most im-

of the ship's stores. Uncooked
uch as ham and bacon, contain
to 50 per cent., while cooked
ave only 15 per cent. of fat. All
f fat generated in the system, and
l in the combustion of the lungs,
in various storehouses in different
the body, being deposited in the
the adipose tissue, between the
under the skin, or around some
iternal organs, where, like a stock
r provisions, it is accumulated till
gencies of the system require its
n this account it is that the body
's *fuller* in the summer than in
ter, when, according as the cold is
e or excessive, is the consumption
ollected fat, and the reduction in
of the body. It is precisely on
principle that in sickness, or par-
liseases, when from the condition
omach no new fat can be generated,
emaciation of the body follows as
quence of the lungs making a
on on the carbon stored up in the
tissues, and consuming it in the
ion going on in the lungs. In
ords, *the use of fat is to supply*
d, when destitute of combustible
l, with a quantity of fuel for com-

The necessity for a large quantity
n all growing animals, and where
ment is imperfect or arrested by
has led to the modern practice of
into the system large quantities
al oils or fats, such as cod-liver oil,
k and suet, in Consumption (which
other forms of debility or disease;
redundancy of this fat not ex-
in combustion being laid up in
about the body, which, as it
larger and heavier in conse-
of the accumulation, becomes more
and vigorous, the presence of the
ng as a stimulant to the develop-
the nervous and muscular tissues.
se beneficial reasons, *thin or ema-*
ersons will always find advantage
g large proportions of *oleaginous*
as a diet, or with their ordinary
nd though fish oil is always
ble, vegetable oils, fat meat, butter,
um are equally advantageous, and
much more palatable. Some of
ers in Germany, who have great
to carry, make a practice of con-
from half a pint to a pint of olive
y, so as to maintain their vigour
ngth at a given point.

are two things which tend to the
g of all animals, not excepting man—*quietude* and *warmth*. The quantity of fat contained in a human body of average height and weight is about twelve pounds. Occasionally, fat is generated in such abundance, no matter what may be the nature of the food, as to amount to a diseased action, which in time either results in a general obesity, or, accumulating round certain organs, eventuates in dangerous disease. Among the causes, apart from a natural predisposition, leading to corpulence, or obesity, are a free use of sugar or saccharine articles, oily or unctuous foods, malt liquor and alcoholic beverages, sedentary habits, repose, and warmth. See OBESITY.

The sources or bases of all the oils and fats formed in the system from our food, are starch and sugar; or, rather, the carbon, hydrogen, and oxygen which they contain, and which, recombined, constitute fat.

The sources of fat or oil in vegetables are extremely numerous, a great number of seeds of plants yielding large quantities of a bland, pleasant oil, admirably adapted for dietetic purposes; others, again, are drastic, poisonous, and medicinal: the former, however, obtained either by pressure from the seeds or eaten in their kernels or fruit, are the sweet almond, chestnuts, walnuts, hickory nuts, swarrow or butter nuts, Brazil nuts, hazel, cob, and filbert nuts; the cocoa, pistachio, cashew, chicha nuts, pine-seeds, beech nuts, and, lastly, the earth nuts, which are the fruit of a leguminous plant, a native of Africa and tropical regions in America and Asia. The seeds when expressed yield a bland, pleasant oil, like salad oil, while the pods containing the seeds are roasted and eaten as a dessert.

THE EARTH NUT.

One of the most important vegetables yielding an edible oil is the olive—the most useful and valuable for dietetic purposes of all the vegetable oils; and though nearly 12,000 gallons are annually consumed in Britain, the quantity is far below what it should be, if sufficient attention were given to its value as an article of diet. The last substance containing fat or oil to which we shall refer, is milk; this primitive article of the higher order of animal life contains 8 per cent. of carbonaceous matter, 4 per cent. of that being butter; these, when milk has stood for some few hours, rise to the surface in what is called cream. In the process of churning, the caseine, or a portion of it, with the water, is separated, and under the name of buttermilk, given in this country to the pigs; while the coagulum —a compound of butyric acid—is called butter. From the proneness of oils, when taken into the stomach, to run into fermentation, and the generation of a rancid butyric acid, causing a hot, burning sensation in the throat, persons should be careful in the quantity and manner in which they take butter, and particularly avoid taking it on hot bread, or new rolls, especially when the stomach is weak. Persons are too apt to attribute the hot sensation in the throat to the presence of bile, and without stopping to question themselves as to what excess of melted butter or hot buttered rolls or muffins they have consumed, rush for a blue pill and black draught, to drive the enemy from the stomach; and thus, under the mistake of a biliary attack, weaken the organ, and throw all the other functions out of order; whereas, all that was probably necessary was to have modified or suspended the use of the offending butter.

The following tables show the proportion of fat contained in a few of our most frequently employed foods, arranged according to the quantity contained.

1st. *Milks*:—

Asses' milk . .	1·5	in 100 parts.
Human milk .	3·0	do.
Cows' milk . .	3·5	do.
Goats' milk . .	5·0	do.

Thus, asses' milk contains the smallest proportion of butter, and goats' the highest quantity of that substance; the human being even weaker in that respect than the milk of cows.

2nd. *Animal Fibre*:—

Soles	contain .	0·25	in 100 parts.
Cod	„ .	2·0	do.
Salmon	„ .	5·0	do.
Herrings	„ .	6·0	do.
Mackerel	„ .	7·0	do.
Veal	„ .	16·0	do.
[illegible]	„ .	25·0	do.
Beef	contains	30·0	in 100 p
Mutton	„ .	40·0	do.
Pork	„ .	50·0	do.

Among the fish we find tha contain the smallest amount of mackerel and herring the largest regard to the meats, veal conta smallest amount of fat, and pc highest, being, in fact, 50 per cent whole. The above table is a usefu in the selection of food for an inv respects the quantity of fat in the taken, but *not* as respects thei forming properties.

FLESH-FORMING FOODS.— shown how starch, sugar, and fat into the system, go partly to combustion and generate anima and partly to be accumulated in lular tissue as a reservoir for futu sions, by their presence acting as a sti to the development of the nervo muscular fibre, we now proceed to those foods which exercise a visi crease on the structure of the bod other words, the flesh-forming al The others—or heat-forming—as shown, consisted, as a general carbon, hydrogen, and oxygen; being the all-important element: th forming, on the contrary, consist principles,—carbon, hydrogen, and *nitrogen;* the latter being the portant principle in this case, hen general appellation of NUTRITI NITROGENOUS substances, from th gen they contain. These four g proximate principles, because the into every fibre and structure, so fluid, of the body, with the excep fat, are called the "organic ele and no part of the frame can exist unless it contains these fou dients; and as a state of perpetual down and building up, or of *de reproduction, is constantly going o body,* it becomes a vital necessity food we consume for preserving tegrity of the frame should contai four organic elements in some other of combination, to be first posed by the chemistry of digestion into the blood, and reconstructed proportions as shall constitute brain muscle, bone, saliva, tears, or w special organization is required. lobster, snake, the bird, and horse annually throws off its shell, skin, or hair, to which we apply the sloughing, moulting, or shedding tl so in the human animal, from the

rt and lungs, a process of ceaseless
is taking place; upon this fact,
logists have calculated that a man
e *fortieth* part of his weight every
d that there is a complete change
wal of all the vital organs in every
ays: formerly, this process of re-
tion was supposed to occupy a cycle
s. The source whence we derive
lements, necessary to reproduction
, is from the animal and the vege-
kingdom; though in a scientific
of view they are all originally
from the vegetable, as the beef,
, or animal fibre on which we
d which yields to our system its
n, was originally grass, or gene-
vegetable matters, and converted
tomachs of the animals into those
bstances that form the immediate
of flesh and blood—albumen,
and caseine,—or the white of egg,
e of flesh, and the principle of

men, like fibrine and caseine, is
in both the animal and vegetable
m, is so called from its white-
nd is familiar to every one as a
rent, adhesive fluid in a natural
nd a white, opaque, tenacious sub-
when coagulated by heat—as seen
both conditions in the raw and
white of egg. From this nitroge-
bstance—albumen—are formed in
degree the whole nervous system,
t wondrous organization, the seat
ur intellectual and sensuous enjoy-
the brain; it also forms a large
tion in the constitution of the blood.
o principal vegetables which yield
n are rye and wheat; a pound of the
ntaining a little over three drachms
men, and five drachms of gluten;
a pound of wheaten flour has a
of an ounce of albumen, and two
of gluten; on which account, both
are extremely nutritious. There
eral substances which coagulate and
tate albumen, and if taken into the
h, would render it incapable of
acted upon for the benefit of the
. The most important of all of these
hol; whatever good a quantity of
lbumen taken into the stomach
produce, would consequently be
ly neutralized by a small amount
its, as the albumen would be pre-
ed in insoluble flakes. This is a fact
should be always borne in mind by
who take raw eggs, or asparagus, on
t of their albumen, for dietetic purposes. This is the remote cause of all those distressing mental affections, loss of nervous energy, and moral resolution, which attend the drunkard or dram-drinker's career, as all the albumen taken into the system, and which should go to the *repair and healthy vigor of the brain and nervous system*, is being perpetually destroyed, as soon as taken or formed, *by the precipitating dram*. For the same reason, the blood is made thin and unhealthy. Withdraw the alcohol, and give raw eggs and asparagus in abundance, and even the drunkard's emaciated frame may be restored to its original strength.

Fibrine is even more abundant in the vegetable than in the animal kingdom, though called by a different name,—being denominated *gluten* in the vegetable, and *fibrine* in the animal kingdom. Fibrine is so called from constituting the chief part or the fibre of muscle, and is in its components very closely allied to albumen, it is, however, not soluble in water, and when suspended in any liquid is easily separated. It is found in the blood, constituting the framework of the clot, and the buffy coat; and as *albumen* forms the brain and nervous tissue, so *fibrine* constitutes nearly the whole of the muscular fibre or flesh of the body.

The plants which yield the largest amount of fibrine or gluten are oats, barley, wheat, maize, rye, buckwheat, rice, and potatoes; oats in the largest proportion, and potatoes in the smallest. It is fibrine which supplies the system with its principal nutritious material; for in some form or other it constitutes the chief stock from whence we derive our organic elements, and, with albumen, is more largely obtained from the vegetable than the animal kingdom.

Caseine is the basis of cheese, and found in milk chiefly, from which it is separated in the form of curd, and differs principally from fibrine in containing no phosphorus. Besides being found in the milk of all the higher animals, caseine is obtained from the seeds of several plants, such as beans, peas, lentils, and the family of the *Leguminosæ*. These three products, of albumen, fibrine, and caseine, were formerly supposed to be purely animal formations, eliminated in the systems of animals from their vegetable food. It is now, however, proved that the whole of them exist ready formed in plants, and that to a greater extent than in animals. Thus, when we eat beans, wheat, oats, and rye, we take the three substances directly from them; but when we eat beef, eggs, fish, and cheese, we only acquire them *indirectly*. The fact cannot be too forcibly impressed on the reader's mind that the *nutritive power* of an article *does not depend* upon the *quantity of the flesh-forming ingredients it contains*, but in the *digestibility* of that article. Thus, rice, which only contains *six per cent.* of nutritive matter, is, because easily digestible, infinitely more nutritious than caseine, which contains *thirty-one per cent.:* the latter, or cheese, in fact, when separated from the milk, being almost indigestible, unless it contains some acid or oil. Those articles which yield the most nerve and muscle, being at the same time easy of digestion and elimination, are the most nutritious; and such are those that afford most albumen and fibrine, as wheat, barley, oats, rye, rice, maize, millet, and the whole order of the *Graminaceæ*. Of all these, however, the palm has been given to wheat,—not that wheat surpasses, or even comes up to oats, in the quantity of gluten, sugar, or fat which it contains, but because wheaten flour alone makes good *fermented* bread. At present it is a matter of question whether that property of fermentation is a benefit or a loss to the system supported upon bread so made. There are two kinds of bread in use, the fermented and the unfermented, or unleavened: of the latter, the most ordinary examples are the Passover bread of the Jews, biscuits, puddings, Suffolk dumplings, and oatmeal and barley cakes. Of the leavened bread there are two kinds, the ordinary loaf and the aërated bread. The common bakers' bread is made with flour, water, salt, potatoes, alum, and yeast, to ferment the dough before the process of baking. Alum was originally used to correct the colour of bad flour, and being found to make the bread flaky and white, it was continued as a system of adulteration; and if alum could be found to exist in any of the tissues of the body, its presence in the bread would be a benefit rather than a harm; but alum, not existing in any part of the body, becomes, when so introduced, a positive evil, in however small a quantity used, as it interferes with the changes which follow its digestion. As for potatoes, containing, as they do, all the principles of the cereals except, albumen and caseine, they are by no means injurious, and in moderation assist the fermentation and lightness of t bread.

Aërated bread is bread thrown in vesicles or bladders, not by yeast or fe ment, but by a kind of effervescence, an there are two methods by which this effected. The first method is by mixin a proportion of carbonate of soda wit the dry flour, and a certain quantity hydrochloric acid (spirits of salt) wi the water to be used; the water is th mixed with the flour, the whole has kneaded, cut into loaves, and put int the oven. As soon as the acid comes i contact with the soda, a chemical chang takes place exactly similar to mixing seidlitz powder: the chlorine of the aci unites with the soda, forming chloride sodium (common salt), while the carbon acid of the carbonate escapes in effe vescence, the sudden heat of the ove forcing the gas through the bread, an thereby in a measure fermenting it i the oven. The ingenuity of this proce lies in imparting *salt* to the bread by th means used to raise it. The second metho is still more skilful, and as it does aw with all manipulations and kneading, infinitely more cleanly and agreeab and in that respect equivalent to th machine-made bread. The flour is pu into a cylinder, and a stream of wate strongly impregnated with carbonic aci forced upon it, the whole being thorough mixed by means of steam power into thin dough; a door in the cylinder i then opened, and the mass runs into succession of small tins, which are in stantly placed in the oven, where, as i the former case, the heat drives out th carbonic acid through all parts of th dough, forcing the mass upwards.

The question whether leavened or un leavened bread is the most wholesom must remain an open question; th Hindoo and the Scotchman, whose nativ and natural grain, rice and oats, will no yield to fermentation, at least prove tha nations can live and thrive on unfermente bread. There are many people on who new and fermented bread acts almo like a poison, and who are consequent obliged to eat dry toast or biscuits: such the aërated bread would be fou most serviceable.

Varied as are the cereals which bountiful Providence has given us food, there are many other fruits a plants supplied with an equally provid hand for our sustenance. Foremost amo all others stands that blessing of he bread-fruit tree (the *Arto-* *sa*), for an account of which FRUIT TREE; while in Africa ind of oak tree bearing a crop iich, after being bruised and ter, yield a mild, rich butter.

t, VEGETABLE. The seeds of ieat are much used on the nixed with wheaten flour, as ut whatever the article em- be, it will fail to be service- th and life unless it contains per cent. of the flesh-forming lbumen and fibrine.

BREAD-FRUIT.

FOODS.—Though the animal resents us with so many food,—fish, flesh, and fowl,— ticle or individual under either ies us with those nitrogenous which we know are not only itious, but afford the bases of ictures of the body—albumen ,—yet out of the whole cata- ; and varied as it is, there is ticle from the entire list on , *alone and unaided by other* *an exclusively live*, and that , is a fluid—in a single word, ot only do the young of all rive, grow rapidly, and enjoy alth on this natural aliment, been proved beyond question able of supporting adult life when unassisted by any extraneous substance. Ages before science had discovered the component parts of milk, or knew on what elements it depended for its flesh-giving properties, the fact was illustrated by classic story in the anecdote forming the plot of the "Grecian Daughter," a heroine who, when her father was condemned by the Sicilian tyrant to perish in his dungeon from hunger, obtained permission to visit him daily for a few minutes, after being first rigidly searched before her admission to the cell. Once within the gloomy precincts, however, and alone with her parent, her filial duty combating her maternal love, she gave to the author of her being the food nature had sent for her child, and thus for weeks fed her aged father from her own bosom. Milk, then, is the type of all food, and if we examine its constitution we shall see *why* it is so. One pint of cow's milk contains 2 drachms of mineral salts—the sulphates, phosphates, and such articles as, we have already said, enter largely into the human frame,—6 drachms of sugar, 4 drachms or half an ounce of butter, 6 drachms of caseine or cheese, and 13 ounces and 6 drachms of water; the whole making 16 ounces, or one pound, which contains the bases of all the group of human foods, the combustible and flesh-forming. In this country cow's milk is universally used as a dietetic agent, except occasionally, when that of ass's is substituted for human milk to infants, because more nearly resembling that of the mother than cow's milk; unless regarded as too rich, when it is customary to mix equal parts of water and cow's milk, and then add a little sugar, a fluid being thus obtained nearer to the human secretion, and every way equivalent to ass's milk. We shall have occasion to speak again on this subject under Infants, Food of, which see. The principal care in regard to milk is to use it fresh and pure, as in warm weather it becomes rapidly decomposed and sour, rendering it perfectly deleterious. When such a change does take place, a few grains of carbonate of soda, or a spoonful of lime water, will always correct the acidity. Milk contains *three* important substances — 1st, the butter, which rises to the top in the form of cream, and is obtained by churning; 2nd, the cheese, which, with sugar and mineral salts, is held in solution in the milk remaining: from this it is obtained by the addition of an acid or rennet, leaving what is called the whey; and 3rd, the sugar, which is procured by evaporating the whey, this milk sugar being called *lactose*. Of these three, caseine is the most important, the quality of the cheese in all cases as a flesh-forming substance depending on the amount of oil or butter it retains; and though containing a very large quantity of flesh-forming material, as a general rule cheese is only profitable as an aliment to the hard-working labourer, whose stomach is vigorous enough to digest its compact texture: the digestibility of cheese may, however, always be promoted by taking a little soda. Cheese, especially the rich and the mouldy, seems to possess the property of starting a change favourable to digestion in the other articles taken into the stomach, and on this account it has become a habit to conclude the dinner with a small quantity of cheese; but as *acids* immediately counteract this operation, and at once render it indigestible, the practice of taking cheese with the object of promoting digestion, while accompanying the meal with wine, especially port and claret, is most absurd and incongruous.

Eggs, on account of the large proportion of albumen and fat they contain, independent of saline principles, are both heat-giving and flesh-forming substances, and, with brains of animals and asparagus, are excellent articles of food; especially for yielding the material out of which nerves and brain are formed. As blood contains a large portion of albumen, it has of late been seriously suggested to adopt some other means of killing than that at present practised by our butchers, not only on account of the economy consequent on retaining the blood, but the service its presence affords to the system, and the exquisite flavour it imparts to the flesh. Dr. Lankester, ignoring public prejudice on the matter, and the Mosaical law on the subject, strongly advocates our eating meat with the blood in it, observing that as we do not bleed hares or pheasants, it is absurd to be fantastical at blood being left in our sheep and oxen; nay, he goes farther, and tells us that if first bled, our game would be much less palatable and digestible. There is yet another substance which was long supposed to be nutritious, and being an animal material, for several years held a divided popularity with arrowroot, but which modern experience has shown to be perfectly unworthy the reputation given to it: the name of this substance is *gelatine*. The sound of cod, but particularly of the sturgeon, when prepared in a peculiar manner, cut into fine shreds and dried, is called ISINGLASS: this is the purest and most useful of all the gelatines made or sold; as glue, the produce of horses' hoofs, sinews, cuttings of hides, and other animal refuse, is the most inferior and offensive. Bits of leather or skin, or shavings of hartshorn, boiled in water and evaporated, yield other glues or gelatines, but of less strength and value. But that variety to which public opinion was so long firmly attached, was the jelly-like substance left after boiling pigs', sheep's, and calves' heads or feet for some time, and then setting the liquid aside to coagulate, or become, on cooling, a jelly. So highly was this substance at one time esteemed as an article of strengthening diet, as to be thought capable of restoring a person almost expiring from weakness: so far, however, is this from being the case, that though possessing nearly the same proportion of the four elements as fibrine, it does not contain the slightest nutritive property. As the boasted efficacy of all soups depends on this gelatine, it will be seen how fallacious is the opinion generally held of them as articles of diet and nutrition.

It must not, however, be inferred, that the presence of this innutritious and indigestible substance in the meat we eat—for it enters into every part of it—is therefore hurtful; quite the reverse; for it assists the nutritious power of the other animalizing agents, just as all coarse aliment assists the digestion of the rich, and from precisely the same reason that a *pint* of beans or oats, mixed with a gallon of cut straw, will do a horse more service than *half a gallon* of either eaten alone. It is only when the gelatine is separated from the rest of the animal fibre, and offered as a food, that the delusion and injury of such a practice becomes apparent.

An ignorance of the chemistry of cooking is not only hurtful to the system, but causes an immense sacrifice in the preparation of our food, particularly in respect of boiled meats, some of the most nutritious portions of beef and mutton being left in, and too often thrown away with, the water in which it is boiled, even when not cooked to that extent by which the gelatine is separated. This serious error arises from the fact that cooks most frequently put the meat or fish to be cooked in *cold water*, by which means all the *salts, juices*, and *albumen* are drawn out of the meat into the water, the meat when cooked being thus robbed of half its nutritive properties; an evil which would be entirely *prevented* if the meat was at first *plunged into boiling water*, the *temperature then reduced* a few degrees, and so continued till the article is cooked: by this means the albumen is at once coagulated over the meat, and thereby the salts and juices kept in till the moment of carving. Though beef and mutton are the best meats on which a man can live, and keep his body in the most perfect state of health, the knowledge of this fact will benefit him but little if his food is badly prepared. Some persons, with a Brahminical prejudice to the taking of animal life, have adopted what they are pleased to call a strictly "vegetarian dietary," and after years of this practice, point with pride to their opinion, and satisfaction to themselves, as a confirmation of the soundness of the vegetarian principles and the propriety of their conduct. Such persons, however, forget or ignore such items of their daily fare as *milk, butter, cheese*, and *eggs*, and because neither beef, lamb, nor poultry grace their table, think that such articles as the above, which we have just shown to contain the chief principles of the animal or nitrogenous class of food, are mere adjuncts to their esteemed vegetable regimen. We have already shown, that to preserve health and strength it is not necessary for a person to consume animal fibre, or, indeed, any animal substance at all, only those articles that afford nitrogen to the system, and those proximate principles—albumen, fibrine, and caseine—from which all the tissues are constructed, and that the *vegetable* kingdom supplies us with these, as well as the *animal;* but that which a man really wants to maintain his vigour, is a sufficiency of wholesome food, and, more than all, a liberal mixture of animal and vegetable substances. It is a fact, proved beyond question, *that the man who has a demand made daily on his bodily exertions, and has his intellectual faculties called into constant exercise, can only faithfully preserve his bodily strength and mental vigour by a good and abundant diet, in which animal food holds a prominent place.*

The proportion which the one class of aliment should hold to the other is a matter of much less consequence than *mixture* and *variety*. Cases sometimes occur, where, from disease or mental antipathy, a person cannot take animal food, or digest even cheese or milk; in such cases an aliment must be found which will supply to the system the principles necessary for health, and afforded by an animal dietary. The following will therefore be found good substitutes,—bread of wheaten flour; the flour or meal of beans and peas, or that excellent preparation of lentils known as the Revalenta Arabica; the autumnal and summer fruits, brocoli, and, as a means of supplying albumen, asparagus. As a general rule in the matter of bread, that made with undressed flour, or *brown bread, is considerably more nourishing than the white loaf*, because much of the nitrogen adhering to the husk is rejected in the bolting of the flour. See OATS. Another fact connected with bread is, that *close* bread, or bread but little fermented, is more supporting than the light loaf, for a man can work much longer on close bread than on light. There is another form of bread—or what may be called such—which will be found highly beneficial to persons whose appetites prohibit the use of animal food, namely, the homely flour and water puddings, pudding-cakes, and the well-known Suffolk dumplings. A most unjust prejudice has hitherto condemned these unfermented puddings as being heavy and indigestible, and from this ill report they have always been reserved for the special use of children and school-boys, on the score of economy, before meat, and as supposed to be only fit for sharp and juvenile appetites to dispose of. This, however, is quite a mistake; it is satisfactorily proved that this combination of pure flour, a little salt, and water, not only presents one of the *best forms* in which all the qualities of wheat flour are developed, but that it is *eminently nutritious*, and most *easy of digestion:* even the Suffolk dumplings, made so close, and eaten cold, are found to be equally excellent in their quality of food. Turnips, Jerusalem artichokes, and several of the spring vegetables, as they contain a portion of nitrogen, may be partaken of as a substitute for meat.

Fruits, whether raw or cooked, cannot fail to be advantageous as a food, for, independent of the large proportion of sugar contained in them, they all possess those necessary ingredients in the structure of the human body — phosphorus and sulphur. Of all our English fruits the apple is unquestionably the most valuable as a food, and possesses this advantage—that it is as serviceable cooked as when eaten raw; and however meagre a supper may seem composed of a slice or two of bread and an apple, the person who partakes of it will give his system as much nutriment and flesh-forming material as he who regales himself on devilled kidneys or broiled steaks. Of the easy digestibility of apples, when properly masticated (see APPLE), there can be no question. Those necessary ingredients in the masonry of the human body—the phosphates, sulphates, and carbonates—are yielded in large quantities by most of our fruits, such particularly as currants, raspberries, strawberries, and gooseberries, on which account, and from their corrective property and action on the blood, their use is of the utmost consequence, while in all scrofulous and scorbutic habits the free employment of fruit is most beneficial, by its acid being quickly decomposed in the stomach, and the alkali entering the blood and correcting its acidity.

We have said much about the proximate principles of heat-forming and flesh-forming substances, such as carbon, starch, sugar, albumen, fibrine, and caseine, but important as these are, the cluster of mineral articles, or salts, supplying the lime, soda, potass, magnesia, and silica, are in their way quite as necessary to the well-being of the system as any of the others, for though the foods taken may yield albumen and fibrine, the body for want of these salts will perish as effectually as if the person had been purposely starved to death. Majendie, many years ago, discovered that if a number of dogs were fed respectively on caseine, butter, cooked meat from which by great pressure all the mineral matters had been squeezed out, and on caseine, fat, starch, and sugar mixed together, they would all die starved, simply from the fact that the mineral salts were omitted, or absent from each food given. From this it will be seen how necessary these salts are to the very *life* of the person who eats animal food, or should attempt to live on simple animal fibre, from which the natural salts and juices had been expunged. Even when this is not the case, the gravy out of the meat, or the liquor in which it is boiled, or a portion of it, should always be consumed with the meat; indeed, to insure a sufficient amount of these mineral salts, it is always advisable to eat some uncooked vegetable or fruit in the course of the day; a little celery, watercress, an apple, or piece of orange, will answer all the purposes required, variety here being equally necessary as in the mixture of foods for the general meals.

Water has, by most physiologists, been regarded as an aliment, since it, like fibrine and albumen, forms a constituent of the blood and every tissue of the body, as well as the other fluids, and also from the fact that we take large quantities of water into our system with almost every food we consume, both in animal and vegetable substances, besides what is taken in our beverages of tea, coffee, and malt liquor. In reference to the effects of this universal solvent, see WATER; and for the digestibility of the different aliments, see INVALIDS, FOOD OF; INFANTS, FOOD OF; DIGESTION, and SALT.

FOOD, HARD'S FARINACEOUS.—This well-known article of infantine diet has been so many years before the public, that it would be quite unnecessary to say a word on its merits were it an ordinary food; but we regard it as so special an aliment for children, that we wish to draw the attention of mothers, particularly of those who have to rear their children by hand, to an article which a large personal experience of its quality enables the editor to recommend with perfect confidence for such a purpose.

The eagerness with which the child takes and prefers this food, and the rapid improvement it effects in its physical appearance, are among some of the most obvious of its dietetic characters. For the method of preparing, and the various uses to which it can be put, see INFANTS, FOOD FOR; INVALIDS, FOOD FOR, &c.

FOOD, DR. RIDGE'S PATENT.—Though for several years known and tested in private practice, this farinaceous food of Dr. Ridge's has only lately been made public. Ridge's Patent Food professes to be manufactured in an entirely novel and original manner, and is said to be free from all cause of acidity, the Doctor strongly recommending it as a superior food for infants, and, when mixed with beef tea or mutton broth, as a nourishing diet for invalids. We are now testing its quality; and if it meets our approbation, Dr. Ridge's Patent Food will be further alluded to.

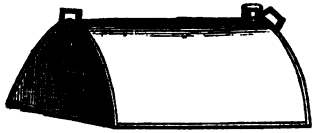
FOOT.—The wonderful ingenuity displayed in the construction of the human foot, and the admirable manner in which it is adapted to the various services it has to perform, make it only second in beauty and design to the hand itself.

›e whole weight of the body falls
›eet, and they are in constant use,
upporting the frame in repose, or
the jar and strain of the body
progression, Nature, to fit them for
ponsible duty, and, in leaps and
divide the force and jar which
›e would perpetually expose the
› the liability of fracture, and the
ıd spinal marrow to serious injury
e shock, especially when a person
ch sudden violence on his feet; a
autiful provision has been made,
ing the foot into the shape of an
ıe strongest of all geometrical
—and by the great number of the
rranged in such a manner as to
te the force of the shock among
›o that the recoil, which would
›e follow, is entirely prevented.
›ot is divided into the ankle (or
he instep, the sole, and the toes.
le joint is composed of three bones,
only two actually enter into the
tion. These are the large bone of
the tibia, and the astralagus; the
r process of the fibula assisting to
ıen the joint, by overlapping the
ing surface of the astralagus, and
ng that bone from being displaced,
much force is used. The instep,
s, consists of seven bones; viz.,
s, or bone of the heel; the astrala-
cuboid, the navicular, and the three
m, or wedge-shaped bones. The
plantar region of the foot, the
which the tread takes place in
tion, is composed of *five* short
cal bones, called the *metatarsus*,
ne having a double articulating
—one behind, to the bones of the
r tarsus; and another in front, to
, or phalanges. Each phalanx,
consists, like the fingers, of three
one large, where it is articulated
metatarsus, and two of different
rming the toes proper. Thus,
the assisting fibula, the entire
composed of twenty-eight bones,
re firmly bound together by cap-
gaments, and cartilages, till the
rchitecture of bone becomes one
mited mass, admitting of play or
in every direction, and rendering
ture of any of them extremely
though they may be occa-
displaced. Into these bones are
the ends of the tendons of the
of the leg, by which the foot
s are either flexed, extended, or
to the right or to the left side.
The manner in which some of these tendons pass under bands, and split into smaller tendons for the different toes, will be shown when we treat of the hand. Besides the usual amount of bloodvessels, nerves, and lymphatics circulating in the part, the sole of the foot is supplied with a thick pad of adipose tissue, to protect the bones and muscles from the injury to which they would be exposed in walking but for this provision.

The fact that persons born without arms have used their feet as hands, painted, written, and fed themselves with their toes, is generally known to most readers, and, though most extraordinary, is not more singular than that a man should hear through his stomach, and feel through his arm or tongue, and will be explained when we come to treat of the properties of that little understood but most important organ, the Human Skin, which see.

FOOT, DEFORMITIES OF. See MALFORMATIONS.

FOOT-WARMER.—A very useful little instrument, made of block tin, and sometimes of earthenware, which, being filled with boiling water, and enveloped in flannel, can be used either in bed or on the floor, and as it will retain the heat for a length of time, is a most useful appurtenance of a sick-room, or when from any cause the person's feet become unnaturally cold, or when, to relieve the head, hot applications to the feet become necessary.



FOOT-WARMER.

FORAMEN.—The Latin name for a hole, whether large or small. The word is largely used by anatomists to express the several apertures in bones through which nerves or vessels enter or pass. Thus we have *foramen ovale*, *f. rotundum*, and *f. cæcum;* or the oval, the round, and the blind foramen or hole, and many others.

FORCEPS.—The name given by surgeons to what are generally known as pliers. Any article that opens and closes, grasps, nips, or cuts, is called a pair of forceps. The most familiar examples of the domestic forceps are scissors, sugar-tongs, curling-irons, and fire-tongs.

Among surgeons, the term is applied to those instruments that pick up, grasp, and crush, and are made of many sizes and shapes, being straight, curved, hooked, pointed, or flat. Mr. Liston, the eminent surgeon, many years ago invented, and was in the habit of using, a pair of forceps of such strength and power, that he could cut through the largest bones with them, preferring them to the saw in many operations.

FOREARM.—The lower part of the arm; that portion from the elbow to the wrist. The forearm is composed of two bones, the *radius*, the outward and largest, and the *ulna*, or inner bone, which unite above to form a hinge-like joint with the *humerus*, or bone of the arm, while below they are articulated with the bones of the wrist, or *carpus*. Besides these two articulations, there is a third between the radius and the ulna, by which the motions of pronation and supination are effected, or the hand turned with its back upwards or downwards. See HAND.

FORMULA.—The manner or style in which any article is prepared. A prescription is a formula. The term, however, is chiefly confined to the preparations in the Pharmacopœia, such as the mode of making Friar's balsam, blue pill, &c.

FORNIX.—A vault: a name given by anatomists to a certain portion of the brain.

FOSSA.—A fosse, or any depression in a bone.

FOURTH PAIR.—A set of nerves, so named from their order of leaving the brain. They are chiefly distributed to the eye. See NERVES.

FOWLER'S SOLUTION OF ARSENIC.—This, the most manageable form in which arsenic, as a medicine, can be used, derives its name from an eminent physician of the last century, who used it as a nostrum in cases of ague. The preparation consists of arsenious acid, potass, water, and compound tincture of lavender, the latter only being added to give the mixture colour, and guard against the danger of mistaking it for water, or some innoxious solution. The preparation is an arsenite of potass, in which one grain of arsenic is contained in two drachms of the mixture, the dose being from 5 to 15 drops, gradually increased, intermitted, and resumed again. See ARSENIC.

FOXGLOVE.—The *Digitalis puerpera* of the botanists. A tall, rank plant, with dark green leaves and bell-shaped flowers, purple without, and internally speckled with dark spots. The foxglove grows wild in all parts of Great Britain, principally in woods and dank shady places. This drug should always be kept excluded from the light.

MEDICAL PROPERTIES.—The chief action of digitalis on the human system is as a narcotic, producing, in a violent degree, all the effects common to that class of medicines. It also acts as a sedative and diuretic. From its active properties and poisonous nature it is, however, seldom given either as a narcotic or diuretic, its use being confined to its sedative properties; and in this respect it exercises a peculiar and almost a distinct effect, for it immediately influences the action of the heart, reduces the momentum of the blood, and pulls down the force of the circulation from seventy to fifty pulsations in a minute. On this account, in all inflammatory fevers, hæmorrhages, diseases of the heart, and in all cases of vascular excitement, digitalis, or foxglove, if carefully given, is of very great service.

As foxglove, however, is one of those drugs which are apt to accumulate in the system and lead to serious results, it is an article which requires to be administered with the greatest care and judgment, and, like arsenic, should be intermitted for some days, and its effects closely watched before being recommenced with. As a diuretic, in combination with squills, foxglove is often of the greatest benefit in dropsies of the chest.

PREPARATIONS AND DOSES.—The preparations of this drug usually kept are the powder of the dried leaves, tincture, infusion, extract, pill, and ointment. Of all these, the tincture (*tinctura digitalis*) is the most manageable and the safest; and as much of the qualities of all vegetables depend upon the manner in which they are dried, and the time they are collected, neither the powder nor the infusion can be safely relied upon: the same objection holds good with the extract, which, by the mode of preparation, may be extremely powerful, or it may be almost inert.

The dose of the tincture is from 10 drops, gradually increased to 30, when it is to be discontinued for a few days, and resumed again at 10 drops for a dose. The ointment sometimes is serviceable in some forms of scrofulous affections of the skin. An overdose of foxglove acts as a violent narcotic poison, in which case an emetic of white vitriol is to be given instantly, and the treatment adopted under that class of POISONS, which see.

FRACTURE.—A fractured or broken bone is one of the most common accidents to which mankind is subject, and may occur as readily to the man of independent means as to him who is compelled to toil for every meal he eats; the falling of a scaffold and the injuries obtained in labour being counterpoised by collisions in the streets, and the accidents common to the field, the course, or the promenade. The system that Nature adopts for the restoration of an injury such as fracture is, like all the other processes going forward in the living body, the most perfect and suitable that could be devised; all that man has to do in the case is to place the broken bones in their natural position, keep the part at rest, and Nature herself effects the cure.

The process is as simple as it is beautiful. A few hours after the accident, a quantity of thick secretion is thrown out, which surrounds the broken ends of the bone, and, in a manner, as glue may unite two pieces of wood, this substance, called *callus*, holds the fracture together. After a few hours more repose, a number of minute vessels spring from the callus on each side, and, gradually meeting, form perfect vessels; and drawing their osseous nutriment from the bony secretion, proceed to the process of laying down a new bony fibre and material, till the injury has been repaired, the interstices filled up with fresh matter, and the union of both ends permanently completed.

When this effect has been achieved, the superabundance of callus thrown out to form material for the union, and which at first gives a thick, lumpy feel to the part, becomes absorbed, and is finally carried away, leaving the bone as smooth as it originally was.

Fractures are of three kinds — the *simple*, *compound*, and *comminuted*.

Simple Fractures are those injuries where the bone is merely broken, without any corresponding tear or injury to the skin and flesh. Such a fracture may be either transverse, longitudinal, or oblique; that is, the bone may be broken right across, like a stick over the knee, or straight down its middle, or else obliquely or in a direction between the two.

Compound Fractures are those when, in addition to a fracture of a bone in either of the above directions, there is also some injury or laceration, superficial or deep, to the skin and muscles surrounding the broken bone, as when the ends of the fracture are sometimes thrust through the integuments.

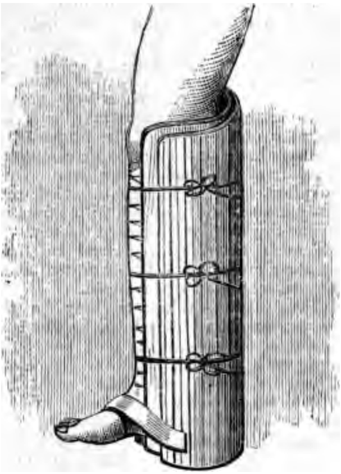
Comminuted Fractures are almost always compound fractures; the only difference between them and such, lies in the fact that a portion of the bone is splintered into numerous fragments; in other words, broken small, or comminuted.

Simple fracture may occur in any bone, though the long bones are more liable to be broken than the flat ones, unless, perhaps, those of the skull. Fractures are sometimes combined with dislocation, in which case the accident is very greatly complicated. Thus, there may be a dislocation of the head of the humerus, or the arm bone, and a simple or compound fracture of the shaft of the bone. Or a luxation, as it is sometimes called, may take place at the hip-joint, with a fracture of the thigh or both bones of the leg. In all such cases, as a general rule, the fracture must be first firmly united before the dislocation can be reduced.

Symptoms. — Whatever may be the cause that has induced the accident of a simple fracture in the long bones, the symptoms are nearly always the same. These are, considerable pain; great loss of power; inability to move the limb in some cases, but not always; swelling; and frequently a shortening in the part from the overlapping of the fractured bones. The only other accident for which a fracture can be mistaken is a dislocation, and from this it is distinguished by the lengthening or the shortening of the limb *always* being an evident feature in dislocation, and only sometimes apparent in fracture.

In the former there is either an enlargement or depression at the head of the bone, the limb is either turned inwards or outwards, and in all cases is fixed, and cannot be moved without much pain; while in fracture the pain is confined to the locality of the broken bone, and the limb, when moved, emits a grating noise by the rubbing together of the rough edges of the bone: this noise is called a *crepitus*, and is, in almost all cases, a reliable symptom.

Treatment.—In the case of a simple fracture, the limb or member is to be gently stretched by an assistant steadying the upper portion, and the operator gently drawing down the lower portion, and with his fingers adjusting the ends of the fracture till they lie in their exact and natural situation; a pad is then to be laid along the outer side of the limb, and over that a splint placed; another pad is next to be applied to the inner side, and a second splint in like manner put over it. A few lengths of strong tape, sufficient to encircle the limb, are then to be passed round the whole, and each one tied in separate girths, as shown in the following cut.

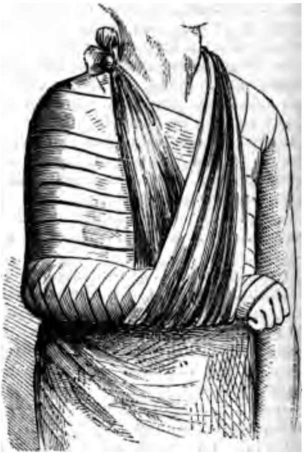


FRACTURE OF THE LEG.

All that is necessary, till the cure is effected, is to tighten the several girths daily as they become relaxed, or to ease them should the member show any indication of swelling. For shape and size of pads, and treatment of fractured arm, see **Arm**, *cut*.

Fracture of the Collar-Bone.—This is a very frequent accident, and may result from a fall or a blow, and is sometimes complicated with dislocation of one extremity, and a fracture of the middle of the bone. This accident is easily detected, first, by the falling forward of the shoulder, and secondly, by the protuberance formed by the overlapping of the edges of the bone.

Treatment.—This consists in pulling back the shoulder so as to bring the broken bone in its just situation, and by keeping it in that position till the cure is effected. Almost every surgeon has his own method of obtaining this result. The following plan, if carefully applied, will be found to answer the purpose effectually: — A firm pad of wool or cotton, about the size of an ordinary pincushion, to one side of which the middle of a broad double-headed roller (see **Bandage**) is to be sewed, is to be placed in the armpit of the injured side; the head of the front bandage is then to be carried over the tip of the shoulder, and obliquely across the back and under the opposite arm, while the head of the back roller is brought forward over the top of the arm, and down the front of the chest, to meet the other end under the opposite arm, sufficient strength being used to secure the bringing back of the shoulder. The same course is to be repeated, the roller from behind being brought forward, and the one in front carried backward, till the arm on the affected side is enveloped from the tip of the shoulder to the elbow. A sling is then to be made of a handkerchief, in which the forearm is to be suspended, as in the annexed cut.



FRACTURE OF THE COLLAR-BONE AND SHOULDER.

A still simpler contrivance is sometimes adopted, namely, by attaching to a piece of narrow girthing two shallow caps, into which the protuberance of each shoulder is to be fitted, and then, by means of strap and buckle, drawing the shoulders back as far as necessary to secure the apposition of the broken bones. In this case, a pad must first be placed in the armpit, as already explained, and then a few turns of a roller passed round the body and arm of the affected side, so as to keep it firmly fixed to the side.

Fracture of the Ribs.—This accident is always indicated by a great difficulty of breathing, with a severe pain over the spot of the fracture.

The chief danger to be apprehended from this accident is injury to the lungs from the sharp edges of the fractured bone piercing their texture.

The *treatment* lies in passing a broad bandage tightly two or three times round the chest, from the armpits to the termination of the ribs. The bandage should be at least a foot deep, and must be drawn so tight as to keep the ribs from rising or falling. It is often necessary to bleed after this accident, or administer tartar emetic and opium, to prevent inflammatory action.

Fracture of the Thigh.—This is regarded as one of the most serious of all the fractures, as the time required for the perfect repose of the patient is so considerable, that the body not only becomes much emaciated, but the pressure of the bed is likely to produce very troublesome if not serious sloughings, or what are called bed-sores. This bone may be broken in any of the three ways named, and almost at all parts of its length; but the most serious of all is that of fracture of the neck of the thigh bone, an accident to which persons advanced in life are chiefly liable.

In the *treatment* of this accident modern invention has devised many most beneficial appliances, by which much of the misery and distress formerly suffered has been greatly ameliorated. Chief among these are the fracture bed and invalid couch. Some surgeons, when having once extended the limb, and placed the fractured edges in apposition, or exactly opposite each other, bandage the whole leg, from the toes to the groin, in a long roller, and then apply their pads,—the short and the long, or the MacIntire splint, and lastly, an outer involution of bandage.

Simplicity, however, is the great aim in the treatment of all fractures, and, much injury is often inflicted on the limb by enclosing it in so many useless bandages where it lies idle, heated, and compressed, should swelling supervene, as it frequently does, when the limb has to be disturbed to take off or cut the bandages. All that is necessary, where there is fear of retraction, or the drawing up of the broken end of the bone, is to secure the foot and instep to the bottom of the splint, line both splints smoothly and evenly with pads, and secure all in their place by straps, or properly tied strings, at every few inches: by this means the limb is in a moment before the eye, when the straps can be tightened or relaxed as required. A bed cradle, made of a few short hoops of wood or wicker, fastened to two flat pieces, is all that is further required: this, being placed over the leg or thigh, prevents the clothes from pressing on the limb and keeping it too hot.

Fracture of the Leg.—This accident may consist of injury to one or both bones. When one bone only has been broken, as in the case of the fibula, a single splint, properly padded, is generally sufficient; but when both bones are fractured, the angular splints—concave splints of wood, in shape resembling the outline of the leg and foot—are used, by the application of which the limb is shut up as in a mummy case. Sometimes this fracture is treated by keeping the limb on the incline, the angle being regulated by a screw in the apparatus.

Fracture of the Knee-pan, or Patella.—Though not a frequent or a dangerous accident, it is attended with much delay and inconvenience. The knee is sometimes fractured in taking leaps, from the sheer force of the muscles whose tendons are inserted into it; or it may be fractured by a fall on the knees, or a blow from collision when on horseback. Perfect rest and a horizontal position are indispensable requisites in the treatment. A surgical bandage—an elastic knee-cap—has been invented for this injury, which, by keeping the broken edges of the bone together, allows the union to take place. When this cannot be procured, the two sides of the bone are to be brought together, and kept in their place by means of a roller, from the ankle upwards.

There are several other kinds of fractures, but their treatment is but a modification of that already given under this head, and the article Arm, which see.

Compound and comminuted fractures are accidents of so serious a nature, requiring instant or early amputation, and so imperatively call for a surgeon's interference, that it would be unnecessary to enter on them in this work.

FRAMBŒSIA.—A disease peculiar to the negroes of Africa. See Yaws.

FRANGIPANI.—A kind of prepared milk, made by evaporating skimmed milk. See Milk.

FRANKINCENSE.—A resin obtained from a great number of trees of the fir species, and greatly esteemed as an incense. The article now universally known as frankincense is the resin called *thus*, a common, inodorous article, little better than common white rosin. The article once so highly valued, and which, with gold and myrrh, was deemed a gift to lay before the Saviour, must have been some other drug more precious than pine or spruce rosin, and was doubtless the still valuable and beautiful substance known as benzoin.

FRAXINUS.—The botanical name of the ash, the most valuable variety of which is the *Fraxinus ornus*, or the ornate or flowering ash, a native of Sicily, in the South of Europe; a tree containing a large amount of sugar in its sap. See MANNA.

FRECKLES.—A cutaneous affection of the countenance to which persons of a florid complexion are greatly subject, especially females with auburn hair. Freckles are small yellow spots that break out over the face in the hot period of summer, and by their number give a stained and unpleasant appearance to the countenance. A still more obstinate form of freckles appears in the winter, often proceeding from a disordered state of the stomach. The best treatment for this form of eruption is to take a three-grain blue pill for two nights, and on the third morning a seidlitz powder,—using the following wash twice a day,—and the application, at bedtime, of a little white elder-flower ointment rubbed into the skin of the face.

Wash for the Face.—Take of—

Sal ammoniac, powdered	1 drachm.
Boiling water . . .	1 pint.

Dissolve and strain, adding, when cold,—

Spirits of rosemary .	½ ounce.
Lavender water . .	2 drachms.

Mix, and use as directed; or a little magnesia, taken occasionally as a corrective, and a lotion for the face, to be used twice a day, composed of 8 ounces of elder-flower water in which 4 grains of corrosive sublimate have been dissolved, may be substituted.

The Irish peasantry are in the habit of washing their faces with buttermilk as a cosmetic, and with great success. An excellent wash for freckles is made by scraping some horseradish very fine, and letting it stand for some hours in buttermilk, then straining, and using the wash night and morning.

Some persons prescribe citric acid, dissolved in water, of a strength sufficient to produce a slight pricking sensation. The juice of a lemon, squeezed into half a tumbler of water, is, however, a more certain means to effect the same result; or a little glycerine, mixed with elder-flower water, may be tried as a cosmetic wash. Any of these preparations, however, are useful, especially when assisted by the alteratives of magnesia, blue pill, and seidlitz powder.

FREEMAN'S BATHING SPIRIT.—This nostrum is not used, as the name might imply, for purposes of ablution, but is a stimulating embrocation, employed in spasms, rheumatisms, and stiff joints, and is supposed to consist of opodeldoc, or soap tincture, with some stimulating spirit.

FREEZING MIXTURES.—As such applications are sometimes wanted for medical purposes when no ice can be conveniently procured, the following preparations will always insure an amount of cold sufficient for almost every state of disease or illness that may require its employment. Now, however, when ice can be so readily procured, it is seldom necessary to resort to artificial cold. When ice is used, it should be broken into small pieces, put in an ox bladder, about half full, the mouth securely tied, and then placed on the head, or part affected. The mixtures made below, with snow, are to be applied in the same manner.

No. 1. Take of—

Snow or broken ice .	1 pound.
Common salt . . .	½ pound.

Mix.

No. 2. Take of—

Snow	3 parts.
Diluted sulphuric acid	2 parts.

Mix.

No. 3. Take of—

Snow	1 pound.
Muriate of lime . .	20 ounces.

Mix.

No. 4. Take of—

Muriate of ammonia .	5 ounces.
Saltpetre	5 ounces.
Water	1 pint.

Mix.

No. 5. Take of—

Sulphate of soda— (Glauber salts) . .	5 parts.
Diluted sulphuric acid	4 parts.

Mix. The various salts in these preparations should be finely powdered, and the coldest water that can be obtained used to mix with them.

FREEZING POINT.—This, in a

Fahrenheit thermometer, is 32°, and the opposite to boiling, which stands at 212°.

FRIAR'S BALSAM, OR COMPOUND TINCTURE OF BENZOIN.—This highly aromatic preparation, commonly called Friar's balsam, is made by dissolving in spirits of wine the resins of benzoin, aloes, storax, and tolou.

Though useful as an expectorant in asthmatic coughs, either a few drops, taken on a lump of sugar, or mixed with squills, syrup, and mucilage in a mixture; it is more frequently employed as an external application in the form of a styptic, to check the discharge from bleeding wounds, and to heal cuts. As all clean cuts, however, require only to be closed by a piece of bandage, to heal of themselves, it is quite unnecessary to inflict pain, and delay the process, by applying so smarting a remedy as Friar's balsam; but as the popular belief is in favour of pain, this favourite styptic will, no doubt, continue to be regarded as indispensable to the healing of cuts and wounds.

FRICTION.—A most valuable agent, both in the process of ablution, and as a sanitary means in keeping open the pores of the skin; but invaluable as a promoter of absorption in chronic enlargements, tumours, and other conditions of the body particularly in strumous habits.

Friction is a species of counter irritation, and can be employed either with the open hand, with a rough towel, or by the flesh-brush. We have already, in so many places, had occasion to speak in the highest terms of friction, and shown its value in restoring infants and adults in fits, suspended animation, in consumption, in the bath, and as a substitute for exercise, that it is quite unnecessary to say anything farther regarding its merits in this place.

FRIGIDARIUM.—The name of the ancient cold bath,—water at the ordinary temperature of the atmosphere, or from 60° to 65°; as the *tepidarium* was from 65° to 96°, and the *calidarium* from 96° to 110°.

FRIGORIFIC.—Extreme cold; the property of producing a very low temperature. See FREEZING MIXTURE.

FRŒNUM.—A bridle; the fold of the mucous membrane that ties down the tongue, and which, when very short, prevents the infant from retaining its hold of the nipple, when nurses say the child is tongue-tied, and have what is called the bridle of the tongue cut. See TONGUE-TIED.

FRONS, FRONTAL.—The forehead; the front or frontal bone of the skull. The frontal bone forms in the male the whole anterior portion of the cranium, extending laterally from the temples, and from the orbits to the parietal, or wall-bones of the skull; in females, however, this bone is generally divided into two by a seam or suture up the centre of the bone.

FRONTAL SINUS.—A space between the plates of the frontal bone extending over the eyes and nostrils, and in health adding to the reverberance of the voice; but when affected by inflammation or a severe cold, the thickening of its lining membrane causes that obstruction in speaking known as talking through the nose.

FROSTBITE.—The parts of the body most exposed to the serious consequence of frostbite are those farthest from the seat of circulation, and the most exposed to a great degree of cold. These are, the toes and feet, fingers, ears, nose, and the cheeks below the eye.

The effect of intense cold is, in the first place, to deaden the sensibility of the part most exposed, which it does by contracting the vessels and driving the blood from the surface, when the part, losing its healthy vitality, is unable to resist the specific influence of the surrounding cold, and quickly falls a prey to the potency of the frost, and, in a short time, a partial gives way to an absolute death, or mortification of the member or organ, which soon after separates or falls off. To guard against the danger of frostbites, the inhabitants of very cold countries, as the Russians and Esquimaux, cover both the cartilage of the ear and the nose.

SYMPTOMS.—A frostbite is known by the swelling and discoloration, attended with pain, numbness, and a sense of pricking in the part, the colour passing from a bright red till it becomes actually black. Sometimes, however, beyond a slight degree of heat, and itching, which soon passes off, the person is unconscious of the danger that is taking place, till too late to save the doomed part.

TREATMENT.—The means employed in the treatment are extremely simple, but upon their *slow* and *cautious* use depends the entire chance of restoring the part or member to life; for should the temperature be too quickly raised, or the circulation too suddenly restored, the perfect mortification, the means are intended to avert, will be certain to follow, when all exertion is hopeless. For this purpose, the part must be slowly rubbed with snow, or bathed with cold water, either in the open air or in a cold room, far removed from fire or warmth. After half an hour of such steady employment of the snow or water, two or three teaspoonfuls of weak brandy and cold water are to be given, the process continued a little longer, a little more spirits and water administered, and the patient finally put to bed in cold sheets, and in a cold room.

When the whole body has been rendered insensible by intense cold, as is sometimes the case in crossing the Alps, and in severe winters even in this country, the same treatment is to be adopted; but instead of rubbing a part only, the whole body must be rubbed with snow, till the friction of several pairs of hands induces some return to sensibility. As soon as that is effected, the body is to be carefully dried, and again rubbed with flannel; an enema of salt and water, with a small quantity of turpentine, is to be thrown into the bowels; the patient put to bed in cold sheets, and in a room without a fire; a few spoonfuls of gruel, with a little brandy, being given almost cold, as soon as he can swallow; and this, or weak wine and water, gradually and at long intervals given to him, the utmost care being taken to avoid exciting sudden reaction, headache, or fever;—as most serious evils will occur should they be induced by hasty or powerful stimulants.

FRUIT.—As articles of food, fruits are divided into *acidulous, subacid,* and *saccharine.*

Though, in general, with the exception of the apple species, they contain little nutriment, the juices of fruit, by affording many of the salts so necessary to the integrity of the body, become highly serviceable to the system, and particularly so in a sanitary point of view, as they act as correctives, aperients, antiseptics, and diuretics. See FOOD.

FRYING.—Of all the modes of cooking both animal and vegetable substances, frying is the most objectionable, and is a form of preparing food that should never be employed for an invalid.

FUCUS.—The name of several varieties of marine plants, such as sea mosses and seaweed, Carrageen moss, &c., from the burning of which, the article used in the cure of goitre and other scrofulous complaints, before the introduction of iodine, was made, and known as burnt *sponge.*

FULLER'S EARTH.—A peculiar species of earth or clay, of a greenish-yellow colour, found in different parts of this country, and one of the principal causes why the British broadcloth has obtained so eminent a distinction for its dress and quality.

This earth contains so much alkali, that it may almost be used as a soap; indeed, it is owing to its detergent qualities in removing grease, stains, and other impurities from cloth, that it has become so generally known. It is, however, as a medical agent that it is chiefly mentioned here, being popularly used by mothers as an application to the skin of infants and children, on account of its cooling and healing properties, being employed as a dusting powder, or as a wash to the chafed and abraded parts of young infants, and for the chronic and fœtid sores to which children are liable while cutting their teeth, both in the neck and behind the ears.

The clay, when fresh dug up, is baked in an oven or kiln, and thrown, hot, in cold water, which causes the fine powder to fall to the bottom; this powder is then washed and dried, and ready for the uses to which it is put as Fuller's Earth.

FUMIGATION.—A process by which the foul gases or impure airs of a room are disinfected or purified. Any substance burnt, or generating by heat fume or smoke, is a fumigation; in this manner the burning of incense, pastilles, the vapours of vinegar given off by a hot shovel, the igniting of feathers or brown paper, each and all belong to the class of what are called agents of fumigation. Such things, however, in general only overpower a previous odour by another more potent or wholesome than the first, and are, consequently, less perfect than those agents which decompose the gases on which the noxious smell depends, such as Disinfectants, which see, and ZINC and TIN, CHLORIDE OF.

Fumigation is sometimes used for the body, when, in certain diseased conditions of the system, the fumes of minerals are directed on the naked body. See BATH, VAPOUR.

FUNCTIONS.—These are the actions or duties performed by the several organs. Thus the function of the lachrymal gland is to secrete tears; of the liver, to secrete bile; of the stomach, gastric juice, the fluid to digest the food. The three most important of all the functions, as those of the heart, lungs, and brain, are called the

mctions, from being necessary for
port of the living body.

DAMENT, FALLING DOWN
his is a complaint to which weakly
a are greatly subject, especially
ffected with worms, and becomes a
of constant pain and irritation to
ient, as every attempt to empty
dder or bowels leads to a pro-
of the lower portion of the *rectum*.
any alarm or crying on the part
hild will induce a protrusion of the
Such a complaint can only be
y cured by removing all cause of
n from the patient's system, and
hening the body.

TMENT.—Lay the child on its face
lap, and having oiled the fingers,
press the bowel in the direction of
s till it glides up. See WORMS.

GI.—A class of plants of which
hroom is the most perfect example.
ngi are divided into the esculent
poisonous; and many accidents
rom the mistaken identity of the
ungi, persons mistaking them for
oms. That called *agaricus* is dis-
ed by the under part of the cap
parallel plates, called gills, within
he seeds are placed. That named
has tubes and circular cells in-
f gills, and it is this striking cir-
nce that distinguishes it from the
om: the boletus, too, is of a circu-
n. The puff-ball, so well known,
seeds internally.

e are nearly three hundred different
of agarics in this country; of all
e, one only has been selected for
ion in our gardens,—the *Agaric*
tris — champignon, or common
om. The gills are crowded, irre-
pinky-red, changing to a liver-
in contact with the stem, but not
to it; white, changing to brown
ld, and becoming scanty; regularly
fleshy, flatter with age; from two
inches, and sometimes more, in dia-
liquefying in decay; the flesh white;
n solid, white, and cylindrical, from
three inches high, and half an inch
eter. When the mushroom first
its appearance it is smooth and
globular, and in this state it is
button. Catsup is made from its
ith salt and spices.

GOID.—A name given by sur-
o a malignant growth, which may
ere simple excrescence, like a wart,
routing up of watery granulations,
as proud flesh,—both simple and easily removed conditions; or a fungoid growth may be a large, inveterate, and malignant tumour, that, like the upas tree, destroys all within its reach. These bleeding tumours, or *fungi hæmatodes*, sometimes called soft cancers, can only be cured by an early extirpation—by an operation,—and even then with no certainty of a final cure, as, like a fungus, they spring up if only an atom has been left behind.

FUNIS UMBILICUS.—The navel string; the cord; that congeries of vessels, of artery, vein, nerve, and lymphatic, which the placenta throws out, and from the extremity of which the child, or fœtus, is developed.

The connecting link of nutrition and life between mother and embryo, and which, on the birth of the child, a new circulation being established by the lungs, is tied and cut. See WOMB, and PREGNANCY.

FURFURACEOUS.—A medical term applied to a peculiar appearance of the urine, when it throws down a sediment resembling bran.

FURUNCULUS.—A boil; an extremely hot, painful, and slowly suppurating tumour. See BOIL, and CARBUNCLE.

G

G is the seventh letter of the alphabet, and as a numeral, stands for 400, and with a dash over it, as thus ($\bar{G}$), for 40,000.

GALBANUM.—A gum-resin of a strong fœtid odour, somewhat resembling assafœtida, the product of a plant native to the East Indies. In its medical properties it also resembles the assafœtida, being an antispasmodic, carminative, and emmenagogue. It is seldom used alone, being generally combined with myrrh, assafœtida, and ginger. A plaster of galbanum is used as a stimulant in certain obstinate swellings, to produce absorption. The dose of galbanum is from 5 to 10 grains.

GALIUM APERINA.—The botanical name of the plants known as goose grass, and ladies bed-straw. Though formerly supposed to possess diuretic properties, both are now obsolete in practice.

GALLS.—Gall-nuts are the product of a species of oak, the *Quercus infectoria*, and are produced by a small fly, which pierces the tender leaf-buds of the plant to make an aperture large enough to contain the eggs of the insect. The buds so wounded throw out a quantity of sap, which gradually covers up the eggs, forming a round, rough excrescence about the size of a gooseberry, which ultimately usurps the place of the bud; when the insect is hatched, it eats its way through the hardened nut; after which, they are ready for gathering. The best galls are those brought from Aleppo.

THE GALL-NUT.

Medical Uses and Properties.—Gall-nuts are of a bluish-green colour, hard, heavy, and rough, and break with a flinty fracture. They owe their medicinal property to a powerful astringent principle, called *tannin*, and are only used, as a general practice, externally, as an astringent. The preparations of galls are a powder, tincture, an infusion, and ointment. The ointment was once a favourite remedy for piles and ringworm, and is still so employed by many medical men; while a few drops of the tincture, in mucilage, have been given in cases of obstinate diarrhœa: but the practice does not meet with approval. The infusion, with a little alum, makes a good gargle in cases of relaxed uvula.

GALL-BLADDER.—A small sac, or bladder, appertaining to and lying on the concavity of the right lobe of the liver, between that organ and the arch of the colon. The shape of the gall-bladder is that of a pear, and its size about that of an ordinary egg. The bladder consists of the fundus or base, the body, and neck, from which latter proceeds a small tube or duct, called the cystic duct, which soon after joins another duct or vessel, coming partly from the liver and partly from the pancreas, the united vessel receiving the name of the common biliary duct, which terminates in the duodenum. See Bile, and *cut*.

The gall, or bile, having been secreted by the liver, is conveyed to the gall-bladder, where it is mixed with a secretion peculiar to that organ, by which its chemical properties are strengthened, till required in the duodenum, to act on the chyme and convert the digested aliment into chyle.

GALLIC ACID. See Tannin.

GALL-STONES.—The gall-bladder is very liable to have a number of calculi formed in its cavity, from the salts in the secretion itself. These calculi, or gall-stones, are of many sizes and shapes; the majority, however, are about the size of a pea; others, again, are as large as a nut, or filbert, and sometimes they are found as large as a walnut.

In many cases these biliary formations never quit the bladder in which they are formed; or if they do, when very small, pass along the duct without the person being conscious of their transit. When, however, a large one, with jagged or rough edges, gets past the neck of the bladder, and into the duct, it must proceed, and in doing so causes the patient the most acute and distressing pain—a pain that, in the first instance, seems the most difficult to account for, as it commences suddenly, is attended with a sharp, cutting sensation, and though the spot at the first stage is so circumscribed as to be apparently covered by the point of the finger, radiating pains dart from it in all directions, through and up the back. The abdomen soon participates in the disturbance, and becomes tense and tender, while the stomach, sympathizing, rejects its contents, and exhausting retchings are added to the distension and pain of the abdomen. Though the distance the calculus has to travel is so short,—only a few inches,—yet, owing to the narrowness and unyielding nature of the duct, the diameter of which does not exceed a crow-quill, and there being no propulsive power to urge the obstruction forward, the cause of the pain and constitutional disturbance

l will be evident to all who reflect
nature of the parts and the obstacle
moved.

REATMENT in such cases as these
ax the system as quickly as pos-
llay the pain, and, if it can be
, expand the biliary duct, so as to
e gall-stone to pass along and fall
duodenum.

irst of these objects is to be effected
ing the patient in a hot bath, and
g him in it for seven or ten
, and by giving a dose of the fol-
mixture every hour till the pain
and by repeating the hot bath, if
ry, twice or three times in the
of the day. Take of—

iphor water . . .	6 ounces.
dered nitre . . .	2 scruples.
ar emetic . . .	2 grains.

e, and add—

danum	2 drachms.

wo tablespoonfuls to be given di-
nd repeated every hour for three
when it is to be intermitted for
me, hot fomentations being laid
he stomach, and the patient being
on his back with the legs drawn
s to relax the muscles of the ab-

ot bath, independent of its relax-
perty, causes the expansion of the
d also of the bile in the bladder,
acting from behind the stone as a
ive agent, driving it into the

VANISM.—It is not our inten-
treat of the science of galvanism
e pages, but only so far as the
agent—called galvanism after its
er, Galvani—affects life, health,
ase; and more particularly as a
l power, a specific and sanitary
means to relieve pain and benefit
g nature, that we propose con-
the subject, classing our remarks
he head of—

ICAL GALVANISM. — Galvanism,
ricity, for they are but different
of the same principle, pervades all
-exists in the air, in the earth, and
water, enters into all animal and
le creations, and appears to be the
l of life. In moderate quantity,
stimulus to our mental as well as
rporeal functions, and, when in
and concentration, is the great
e of nature, clearing the stagnant
d, on its death-searing lightning,
g health and vigour to earth and

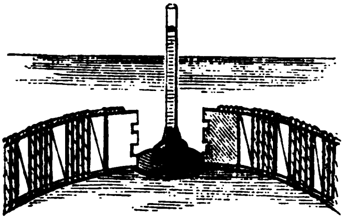
An excess or a deficiency of electricity in the human body acts on the system in a manner analogous to a redundancy or a paucity of the natural salts of the blood, which, as a consequence, becomes impaired, inducing a diseased condition of the body, from a plethora of these proximate principles, as certainly as a diminution impoverishes the blood, and results equally in disease. Thus we have two sets of diseases in the human frame, the remote cause of which is a state of animal electricity *below par* in one, and *above it* in the other, and which, following the universal axiom in the practice of physic—that to restore the system to its nominal integrity we must first remove the *exciting cause* which led to its abnormal condition,—shows us that we have only to draw off the excess of electricity from one set of diseases to lead the way to recovery, and to add in the other to the amount of vital principle lost.

It is nearly a century since scientific and medical men first became aware of the wonderful powers of electricity and galvanism, and under the name of *animal magnetism*, a great principle, capable of diffusing immense benefits to man, was discovered, and to a certain extent demonstrated. From that time till almost yesterday, men of science have been studying how to make this new agent portable to the operator, and a blessing to human nature oppressed by disease and pain; but besides the rude, unsatisfactory method of giving isolated shocks, or passing currents of the electric fluid through the system from a remote galvanic pile, or an electrical machine, nothing *practically* useful had been invented, and but in exceptional cases, such as suspended animation by drowning or hanging, galvanism was a dead letter in the science of physic—a fact without emphasis or conclusion.

Mr. Pulvermacher, of Oxford Street, however, deeply impressed with the importance of galvanism as a therapeutic and medicinal agent, and being profoundly studied on the subject, devoted himself to the discovery of what may be termed a *portable* electricity; and after much reflection, and many years of devoted perseverance, at last brought to a state of perfection an apparatus by which any case of disease might be treated by his Medical Galvanic Chain or Belt, as safely and as easily as by any of the ordinary systems of medicine now in vogue, and often with more decided success.

The beauty of these scientific and ingenious applications of Mr. Pulvermacher lies as much in their great simplicity as in their efficacy of purpose and facility of application. The chain-band, necklace, and belt is each a perfect battery in itself, but of different strengths, according to the number of integral parts or elements of which it is composed. Thus, a battery of twelve elements is comparatively weak when compared with one of forty-two, while the strength of any may be still further increased by a judicious combination of several chains or batteries into one perfect circle. Though by the use of Mr. Pulvermacher's inventions one, two, or a succession of strong shocks may be taken into the system, sparks of electricity passed through an organ or part, or drawn from the body wherever necessary, it is as the conductor of a *silent and imperceptible stream of electricity through a limb, or the entire system*, that its great medicinal power lies, as a specific remedy in many obstinate and inveterate diseases.

As many persons might question the truth of a fact of which their senses of sight and feeling give them no corroborative proof, Mr. Pulvermacher has invented a delicate little test instrument, to which if the opposite ends or poles of two belts or batteries are applied, the other ends being held in the hands, the galvanic current passing through the body will be seen to decompose the water in the tube before him. This is not only an elegant and conclusive experiment of the circulation of the galvanic current, but it is a highly interesting and instructive illustration of the decomposition of water by medical galvanism.

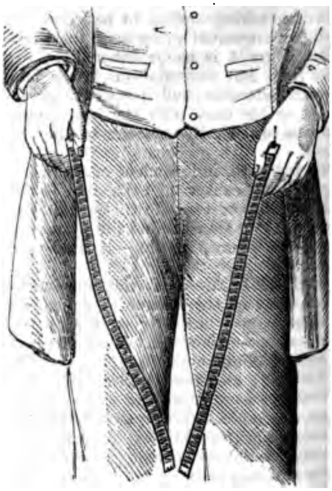


PULVERMACHER'S GALVANIC CHAINS DECOMPOSING WATER.

The diseases in which medical galvanism affords the most gratifying proof of its efficacy are all neuralgic affections, such as tic-douloureux, toothache, sciatica, paralysis, epilepsy, hysteria, cramp, spasm, and tetanus; rheumatism, gout, dimness of sight, deafness, asthma, and a host of others.

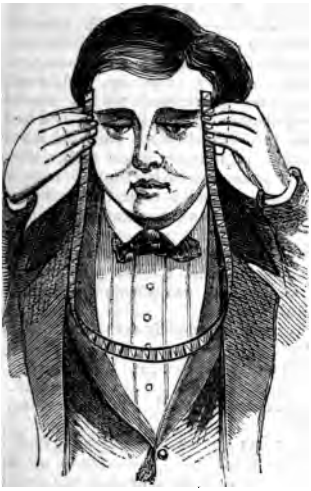
Each chain or belt, whatever number of elements it may contain, is a perfect battery in itself, with a negative and a positive pole to each. The medical properties displayed by the Pulvermacher belts and bands are—first, stimulant and deobstruent, causing absorption; secondly, sedative, by subduing pain; and lastly, as an anæsthetic, rendering the body in some cases so insensible to pain, that operations can be performed without the patient seeming conscious of what is being done.

The accompanying cuts show the modes of applying the Pulvermacher bands for ordinary purposes. For their form of application in special diseases, see NEURALGIA, HYSTERIA, RHEUMATISM, GOUT, GOITRE, &c.



TAKING SHOCKS FROM PULVERMACHER BELTS.

The only place where these invaluabl aids in the treatment of neuralgia an chronic affections can be procured is Pulvermacher's, Oxford Street, whe every information in connection with the use and capabilities will be freely imparte All that is necessary in using these bel and chains is to pass the whole throug weak vinegar and water, fix one pole b means of tape to the nearest part of th pine, and surround the affected part with the belt and opposite pole.



PASSING SHOCKS THROUGH THE TEMPLES.

GAMBOGE.—A powerful drastic g; a gum-resin of a brilliant yellow ur, obtained from the sap of an East ian plant.

This well-known article, used more fre- ntly as a pigment than as a medicine, rcises only one action on the animal tem—that of a powerful cathartic—un- s taken in excessive doses, when it in- ces vomiting and acute pain. On account its rapid action, and producing watery acuations, Gambogo is a drug of great portance in all cases of dropsy, apo- xy, and where a brisk action and pious discharge from the bowels are quired. It should not, however, be ven alone, but combined with aloes, locynth, and scammony. The dose is m 1 to 5 grains. It is sometimes given powders in dropsy of the belly, as in e following prescription. Take of—

Cream of tartar . . .	1 drachm.
Jalap powder . . .	1 drachm.
Gamboge, powdered .	24 grains.

ix thoroughly, and divide into six pow- rs, one to be taken every four hours.

In cases of tape worm, gamboge is also ployed for adults, and often with bene- , especially when combined with aloes d the articles given above. It also enters into the composition of many of the patent medicines.

GAME, as an article of food, is light of digestion and very nutritious if not kept too long; for if so, and the fermentation of putrefaction has set in, it is so far from being nutritious and wholesome, that it becomes positively injurious, and often acts as an irritant poison, unless its deleterious effects are qualified by a dose of castor oil and laudanum. See INVALIDS, FOOD FOR.

GANGLION.—This is a name given by anatomists to a system of small knots or glands found in the course of all long nerves, where they act as reservoirs of nervous energy, so as to maintain the integrity of the nervous cord to its extremity, however remote from its seat in the brain or spinal column. Independent of the ganglions found on the great nervous trunks, there is a system of these knots situated in the thorax and abdomen, called the ganglionic system; and as this network and congeries of ganglions is designed to supply the digestive and reproductive organs, it is also called the nutritive system. See NERVOUS SYSTEM.

GANGRENE.—The partial death of a part; the preliminary stage to mortification, or the absolute death of a part.

The CAUSES of gangrene are very numerous. It may arise from any excessive inflammatory action, from extreme cold, great bodily prostration, from severe blows, wounds, and accidents, and, indeed, from any cause that greatly depresses the vital powers; it also arises spontaneously in persons advanced in life, showing itself in the feet or toes, and, among the aged peasantry, is a very frequent cause of death.

SYMPTOMS.—Swelling, more or less extensive, loss of warmth in the part, a diminution of all pain; a bluish hue settles on the cuticle, which gradually deepens into a purplish brown; the discharge, if any, ceases, there is a loss of all sensation, the skin is raised into vesicles, or blisters, which break, and a thin, fœtid, ichorous discharge escapes. From this time the cuticle undergoes another change, and becomes of a yellowish green; the pulse is quick, small, and feeble; a low, hectic fever supervenes, the patient rambles in his talk, delirium follows, and hiccough for an hour or two precedes death.

Gangrene never attacks a limb or part where the circulation is strong, but those places where it is most languid, and remote from vigorous action.

When it attacks the point of the great toe, it gradually advances over the whole member; the others next become involved, and then the foot, when extending up the limb, destroying all to the centre as it spreads, till, reaching a spot where the circulation is strong, some lymph is thrown out from the healthy side in a complete circle round the part, cutting off all access, and drawing a line of demarcation between the living and the dead flesh. Were the limb now left alone, the gangrenous extremity would, after a short time, drop off as evenly as if it had been amputated.

TREATMENT.—This, to be at all effective, must begin before the vesicles rise, or sensation is lost in the part. The first efforts must be directed to raising the temperature of the skin, by a succession of warm, soft poultices, placing bottles of hot water in the bed, and by the employment of warm, diffusible stimulants to the system, so that, by rousing the circulation, the blood may be propelled with greater energy to the affected limb: a generous diet, with wine, bark, quinine, and opium, are the agents by which this result is to be obtained.

The following mixture is an illustration of those general principles. Take of—

Camphor water . . .	6 ounces.
Aromatic confection .	1 drachm.
Carbonate of ammonia	½ drachm.

Mix, and add—

Laudanum	1 drachm.
Aromatic tincture . .	½ ounce.
Compound tincture of bark	½ ounce.
Spirits of sulphuric ether	1 drachm.

Mix: two tablespoonfuls directly, and one every two or three hours, according to the urgency of the case. The poultices are to be continued to the part till the natural warmth returns, and the skin begins to assume a healthier hue. Concurrent with these remedies, the patient should be fed every hour with beef tea, thickened with Dr. Ridge's patent food, or grated crumbs of bread, and, if necessary, an occasional quantity of wine and water.

For the gangrene that follows frost-bite, or exposure to cold, the very opposite of this treatment is to be adopted, and neither heat nor stimulants on any account employed. See FROSTBITE.

There is a form of gangrene extremely malignant, which often rages in infirmaries, gaols, and convict prisons, known as hospital gangrene, but on which it is needless to enter here. See MORTIFICATION.

GAPING.—This is a mere symptom of relaxation, or approaching hysteria or syncope. See YAWNING.

GARGLE.—A wash for the throat, according to the disease affecting the mouth or throat; the gargle is either astringent, stimulating, or relaxing. Astringent gargles are either made with a decoction of logwood and alum, sage tea and burnt alum, infusion of rose leaves and sulphuric acid, or may be made with a decoction of pomegranate bark and burnt alum. A decoction of oak bark and cinchona bark, either with alum, vinegar, or sulphuric acid, also makes a good astringent gargle. 1 drachm of alum, dissolved in 5 ounces of water, to which 1 ounce of tincture of myrrh is added, makes a very pleasant and useful gargle.

Gargle for a putrid sore throat.—Take of—

Decoction of oak bark .	12 ounces.
Muriatic acid . . .	½ drachm.
Tincture of myrrh . .	3 drachms.

Mix.

A relaxing or demulcent gargle is usually made with a decoction of pearl barley and a little powdered saltpetre, or a decoction of marsh-mallow and nitre.

The stimulating gargle is prepared by adding to 5 ounces of infusion of rose leaves 1 ounce of cayenne vinegar. This gargle is especially useful in the sore throat that follows scarlet fever. Gargles should never be given to, or attempted to be used with children.

GARLIC.—This warm, stimulating condiment and vegetable, which on the Continent enters so largely into all preparations of food, is but seldom used in this country in any culinary process, while in medicine, though formerly greatly esteemed as an epispastic, expectorant, diuretic, and stimulant, it is hardly ever used. An ointment made by mixing the beaten root with spermaceti cerate is the only preparation that now finds favour with medical men.

Garlic belongs to the well-known family of the *allium*, of which there are three varieties,—the *allium cepe*, the onion; *a. porrum*, the leek; and the *a. sativum*, the garlic.

GASES are transparent, elastic, aëriform fluids, which at all changes of the atmosphere preserve their elasticity. Gases unite with each other in different proportions to form entirely new compounds. The elementary gases are hydrogen, nitrogen, oxygen, and carbonic oxide. Thus the most opposite effects are yielded by the same base, according to the amount of the other gas that enters into combination with it. When carbon and oxygen are united we obtain carbonic oxide, carbonic acid gas (or choke-damp); and when a certain proportion of hydrogen is added to the compound, we make that inflammable article used to light our streets, and which forms the terror of the miner's life—fire-damp.

GASTRIC JUICE.—A sharp, acid secretion from the arteries circulating in the lining membrane of the stomach. A very powerful solvent, and one of the most important secretions of the body, as on the strength and abundance of the gastric juice, and the due exercise of its function, depends the healthy operation of all the organs in the system. The gastric juice is a clear, transparent fluid, containing several salts, albumen, mucus, and a mixture of muriatic and acetic acids, giving it that sharp, acrid taste experienced when, in certain weak states of the stomach, a quantity of the gastric juice is expelled by the mouth. The property of the gastric juice is to dissolve, break down, or reduce into one soft mass or pulp all the aliments, whether animal or vegetable, fat, lean, sweet, acid, or inert, taken into the stomach for food, into such a condition that when, as chyme, it passes into the duodenum, the bile may readily separate it into its nutritious and refuse parts.

The gastric juice is not only a solvent of food in and out of the stomach, but it an antiseptic, and has the property of checking putrefaction when once commenced. See DIGESTION.

GASTRITIS.—Inflammation of the stomach, which see.

GASTRODYNIA.—This is a painful affection of the stomach, the consequence of impaired digestion, and is attended with pain, more or less severe, from half an hour to three hours after a meal, and which is generally relieved by taking a little food, and by pressure. The usual symptoms of headache and dyspepsia accompany this affection. This disease most frequently arises from an absence of solvent power in the gastric juice, though sometimes it proceeds from an excess of its acidity. In the former case, a little vinegar or a few drops of muriatic acid, taken before a meal in a tablespoonful of infusion of calumba or gentian, will generally remove the cause; and in the latter, a powder composed of 5 grains of dried carbonate of soda, 2 of rhubarb, and 1 of ginger, is to be taken an hour before each meal. See STOMACH.

GAZOGENE.—A neat chemical apparatus employed to extemporize soda water, ginger beer, sherbet, and other popular summer drinks.

GELATINE.—The base of all animal fibre, as gluten is of vegetable, both substances being almost analogous in their chemical composition.

Glue is the coarsest form of animal gelatine, as isinglass is the most perfect and elegant example. Calf's foot jelly is another instance of gelatine. As gelatine was known to contain a large proportion of animalizing principle, or nitrogen, some ten years ago it became the fashion among physicians to prescribe gelatine to their invalid and convalescent patients, and great quantities were prepared for the purpose of being extemporised into basins of soup by heat and boiling water. The fallacy of the plan soon became apparent, and, as we have shown under Food (which see), gelatine was found to yield from itself no nutritive properties; its use, unless combined with other substances containing the salts proper to animal fibre, being, if not hurtful, absolutely inoperative for benefit.

GELATIO.—A species of sloughing gangrene, the result of serious frostbites. See FROSTBITE.

GEMELUS.—The name of two muscles of the thigh.

GENERAL PRACTITIONER.—A name applied to medical men holding the rank of surgeons and apothecaries, and embracing the great bulk of the medical men in town and country. The general practitioner acts as a surgeon and apothecary—that is, he performs all the minor operations that may occur in his practice, and sometimes even undertakes the capital ones; while as an apothecary he acts as a physician, only that in addition he sends his own medicine, which a physician cannot. He is not, however, entitled to fees, the price charged for his medicine and occasional visits being deemed a sufficient recompence. See SURGEON, FEES.

GENERATION. See PREGNANCY.

GENIO-GLOSSUS AND GENIO-HYO-GLOSSUS.—Two sets of muscles which connect the tongue with the chin, and with the chin and HYOID bone, or the small arched bone found at the base of the tongue, and to which the adjacent soft parts are attached.

GERMAN YEAST.—This has in a great measure superseded the use of

English beer yeast in London, and other places conveniently situated for receiving quickly and regularly the supplies of it which are imported from abroad; but as it speedily becomes putrid in sultry weather, and does not in any season remain good long after its arrival here, it is not suited for transmission to remote parts of the country. Bread made with it while it is perfectly sweet is extremely light and good; it also answers the purpose for light cakes and biscuits: an ounce of yeast to three pounds and a half of flour will be found the best proportion to produce a successful baking.

In using it, the yeast should be very gradually and perfectly moistened, and blended with the warm liquid in which it is usually mixed; for unless this be done, and the whole rendered smooth as cream, the dough will not have the uniform texture which it ought to possess.

GENTIAN.—One of the most useful of our bitter roots. The *Gentianis lutea*, as it is botanically called, is brought in great quantities from the Pyrenees; and though other parts of the plant contain medicinal properties, it is the root only, or rather the root stems, which are prepared for use.

Though not a pure bitter, gentian is considered as one of the most valuable of our bitters, and is largely used in this country as a stomachic and tonic.

The preparations of this drug in general use are a powder of the dried root, a simple and a compound tincture, an extract, and an infusion. The compound tincture, from containing some warm aromatic spices, orange peel, &c., is a medicine of singular efficacy, and is now largely sold by publicans as bitters. The dose is from 2 to 3 drachms, either neat or taken in water. The infusion can be prepared at any time, and will be always found to act as a superior tonic and bitter.

Two drachms of gentian, the same of ginger, some orange peel, and ½ a drachm of grains of paradise, all bruised and infused for six hours in half a pint of boiling water, will, when cold and strained, yield a stomachic mixture, of which two tablespoonfuls may be taken with the best effect three times a day; while in cases of indigestion, if 10 grains of soda or potass are added to each dose, the efficacy will be still more enhanced.

GEOFFROYA. — The cabbage tree bark. See CABBAGE TREE.

GESTATION.—The process of development, or breeding. See PREGNANCY.

GHEE. — Indian butter; generally prepared from the milk of buffaloes. It has the advantage of keeping many months without spoiling, and as it is not affected by the heat, is universally used by the natives of India.

Ghee is prepared by boiling the milk fresh from the cow for two or three hours, and when cool, a little curdled milk, called *tyre*, is added as a leaven to promote coagulation. When cold, it becomes quite firm, and a piece five or six inches in depth' is then cut from each pipkin and put into an earthen jar, when it is churned by turning a split bamboo in it with as rapid a motion as possible. In half an hour a little hot water is added, and after half an hour's longer churning the butter or ghee is formed. It is now set aside for two days, when the heat has rendered it rancid. It is again melted and boiled till the water in it is evaporated, when a little more *tyre*, salt, or beetle-leaf is added, and it is put into pots and kept for use. It is greatly sought after by all the natives, and forms an important article of commerce through a great part of India.

GIDDINESS.—A swimming in the head, accompanied by a sensation as if the person were about to fall.

Giddiness is a mere symptom of fulness of blood in the head, or of some nervous affection. See APOPLEXY, FAINTING, &c. An ordinary giddiness, arising in hot weather from over exertion or exposure to the sun, should be treated by a mild aperient, a dose of Epsom salts, or a blue pill and seidlitz powder.

GIN.—A well-known English spirit. See HOLLANDS, and SPIRITS.

GINGER. — The *Zingiberis radix*. This excellent and universally used spice is the root of a plant belonging to the Natural order *Zingiberaceæ*, native to both the East and West Indies.

MEDICAL PROPERTIES AND USES.—No spice is more generally used in medicine than ginger, not only on account of its warm, stimulating properties, but because it suits almost every stomach, possesses no essential oil, and acts as a cordial or carminative, as well as a wholesome stimulant to the coats of the stomach. The finest ginger is brought from the West Indies, and the two principal kinds in use are those known as the Barbadoes and the Jamaica, the latter being in size, strength, and colour the finest.

Bruised ginger enters into the composition of most of our tinctures, and is

nto a tincture, a syrup, and
ge. A powerful tincture,
c or seven times the quan-
to the pint of spirit ordered
macopœia, was for many
; popular patent medicine,
ame of Oxley's Essence of
s preparation, still in use,
recommended to persons
weak and cold stomachs.
nger, in combination with
ubarb or calumba, will be
ntly recommended in this
d stomachic powder.

GINGER ROOT.

BEER.—There are many
reparing this pleasant and
e; the following will afford
scing product. Take of—
ur . . . . 1 pound.
nger . . . 1 ounce.
artar . . . 6 drachms.
s sliced.
ter . . . 1 gallon.
whole, frequently stirring
essel till almost cold; then

. . . . . . 2 ounces,
s tablespoonfuls; stir, and
tand covered up till the
, or till the fermentation
ce. The liquor is then to
strained through flannel,
ferment another day; then
skim off the scum, bottle, and tie down the corks.

GINGER BEER POWDERS.—These are nothing more than common soda powders, with the addition of sugar and ginger, as thus. Take of—

Carbonate of soda . . 3 drachms.
Powdered lump sugar . 1 ounce.
Powdered ginger . . 2 drachms.

Mix thoroughly, and divide into twelve papers.

Tartaric acid . . . . 3 drachms,

and divide into twelve papers. Tie a large and small powder together in pairs, and when required, dissolve the largest or soda powder in a tumbler two-thirds filled with water, then add the small or acid powder, stir briskly, and drink while effervescing.

GINGLYMUS.—A hinge; a name given to those articulations which open and shut like the hinge of a door, such as the elbow joint, the wrist, and ankle. See Articulation.

GINSENG.—A tonic plant held in great esteem by the Chinese, and so highly prized, that few prescriptions are compounded in which it does not enter in some proportion.

GLAND.—A small round, oval, or oblong body; a small organ secreting a fluid of some special nature.

Though we style all glands as small, such is not in fact the case, as some are of considerable size, to which the term of organ is generally applied. Of this nature is the liver, which, as far as it is a secreting substance, is a gland; so also is the pancreas, the spleen, and the kidneys.

It is customary, however, to describe such parts as organs, and confine the word gland to those small bodies, many of them too minute for common observation, but which yet perform most important functions in the animal economy. Of these are the system of salivary glands, situated beneath the tongue, the jaw, and in the cheeks, and without the secretion of which we should be unable to taste or enjoy our food; the perspiratory glands, an immense congeries of minute glands lying below the skin, each one furnished with a spiral tube or duct, that opens out on the surface of the cuticle at what are called the pores, and discharge through these mouths the perspiration which they are constantly collecting to pour out, and not only keeps the skin healthy by that means, but at the same time carries off the refuse moisture from the body by that ingenious plan. When from any cause these glands do not pour out their fluid, the skin loses all its healthy properties, both as a breathing apparatus and as an organ of feeling. See PERSPIRATION, INSENSIBLE. The lachrymal and lymphatic glands have already been spoken of under Eye, and Absorption, and Digestion, which see. There are still many other single glands and systems of glands, such as the thyroid, in the neck, the seat of goitre, and the mesenteric glands of the abdomen.

GLANDULAR SWELLINGS.—Chronic enlargement of one or other of the glands; a tumour. See SCROFULA.

GLANDERS.—A malignant and loathsome disease, to which the whole horse family are liable, and almost always resulting in death. Of late years it has been proved that man is liable to be inoculated by this inveterate disease, and in all cases with the most serious results. The disease appears to be a specific affection of the mucous membrane of the mouth and nose, resulting in a number of tumours or glandular swellings of the throat, the animal eventually dying from incapability to swallow. Though the most rigid laws have been passed to punish all who expose glandered horses in street or market, they are still sometimes worked to the last; and men who have drunk from a horse trough, where such an animal had lately been watered, have been seized with the worst form of the disease.

GLANS.—The name applied to a part of the male anatomy; so called from its shape resembling an acorn.

GLAUBER SALTS.—A saline purgative, and before the introduction of Epsom salts the only saline purgative in use, and though coarse and griping as they are, were at one time much esteemed. Glauber salts are composed of soda and sulphuric acid, being a sulphate of soda, as Epsom salts are a sulphate of magnesia: these salts are now only used for cattle. Being stronger than Epsom salts, their average dose is 6 drachms.

GLAUCOMA. See CATARACT.

GLEET.—A thin discharge from the urethra. See letter V.

GLENOID.—The name of a cavity or articulating surface in the scapula or shoulder-blade, in which the head of the bone of the arm plays to form the shoulder joint.

GLOBULES.—The small red particles which, made up of fibrin and red globules, constitute the chief portion of the blood, and, when it coagulates, its clot.

For the modern meaning of the word globule, as applied by the followers of Hahnemann, see HOMŒOPATHY.

GLOSSA.—The Latin for the tongue, and the source of the names of all the muscles moving that organ. See TONGUE.

GLOTTIS.—The slit or aperture at the entrance of the organ of voice, situated between the cartilage known as the arytenoid, and the access by which the air descends the windpipe and reaches the lungs, and which opening is protected by the small cartilage called the epiglottis, which in swallowing falls like a lid or valve over the opening. See DEGLUTITION, and DIGESTION, *cuts to*.

GLUE.—A coarse kind of gelatine made by boiling the skins and sinews of animals, till, on being strained and cooled, it hardens into cakes. As this is the commonest kind of gelatine, so is isinglass the most perfect.

GLUTÆI.—In anatomy, the name of three sets of muscles which move the thigh—the *glutæus major*, *medius*, and *minor*. From the above word we derive the *glutæal* applied to the nerve, artery, and vein, supplying the gluteal region.

GLUTÆUS.—The hip, or buttock.

GLUTEN.—The tough, tenacious substance left after washing flour, and depriving it of all its starch. Gluten is to the vegetable what gelatine is to the animal kingdom. See GELATINE, and FOOD.

GLYCERINE.—This article, which modern chemistry has discovered, and the knowledge of whose uses is as yet in its infancy, is the base or proximate principle of all oil, grease, and fat. All fats and oils, as we have shown under the article Food, Heat-forming, consist of two principles, *oleine* and *stearine;* these in their turn are composed of an acid called *stearic*, or *oleic acid*, combined with an oxide of *lipyle;* in other words, glycerine is obtained from the soapboiler, and is yielded from his melted tallow and oil, at the moment he adds the alkali or potass to his liquid fat, the alkali uniting with the stearic acid, or the oleic acid, whichever may be the preponderating acid present, forming the saponaceous mass that is afterwards to become the hard bar of soap; and the glycerine, set free, floats about the mixture.

Glycerine is a clear, transparent liquid, like thin oil, with a faint, luscious smell,

land, intensely sweet taste, like
oney. As an internal medicine,
e has as yet hardly received that
n to which its properties entitle
rnally, however, its efficacy has
re largely tested, and from its
and protecting properties, it has
ch employed in the manufacture
ient soaps. It is, however, as a
pplication that its benefits are
ervable. In cases of chapped
xcoriations on any part of the
rticularly in infants (see In-
racked lips, abrasions, scratches,
r affections or accidents, the gly-
pplied pure to the part will be
ry serviceable. As a cosmetic, a
glycerine in elder-flower water, in
rtion of ½ an ounce of the former
ces of the latter, makes a very
sh for the face, particularly in
ther. Glycerine has been used in
deafness, but its effects are very
able.

CYRRHIZA.—The botanical
Liquorice Root, which see.

TER. See Enema, and Injec-

S' MILK. See Milk.

REY'S CORDIAL.—The article
nder this name, when properly
and judiciously used, is an ex-
ordial medicine in most cases
g and other irritations in the
and bowels of children; and, if
sted in as a habit, or given to
to make them sleep, as safe and
compound as needs be given, and
holds a second place to "Dalby's
tive," which we regard as the
this kind of patent medicines.
's cordial is composed of sassafras
oriander, aniseed and caraway
d ginger, boiled for a certain time
, to which a quantity of treacle or
ith a due proportion of laudanum,
and after standing for some time
, is strained and bottled. When
t a wholesale house, proper direc-
to the dose, regulated according
ount of laudanum used, accom-
e bottle, and should be always
to. But as most chemists make
y's cordial of their own, the dose
for the age of the child for which
ght should always be ascertained
article is purchased.

**RE, BRONCHOCELE, or
SHIRE NECK,** as the general
ent of the thyroid gland of the
variously called, according to the country or locality in which the disease is prevalent.

The causes of this unsightly deformity are far from being satisfactorily understood. By some it has been assigned to drinking snow-water; by others, to water loaded with lime and magnesia; but it has been found epidemic in localities where neither of these circumstances prevail.

It more frequently attacks females than males, and, though present from early life, seldom becomes greatly enlarged till the person has turned forty; cases, however, not unfrequently occur where it advances from the age of puberty, and in a few years attains a considerable size. Those most frequently attacked with goitre are persons of a phlegmatic temperament.

Treatment.—Before commencing the treatment of this disease, a piece of tape should be first passed round the neck, and the exact size of the swelling and throat taken; the measure being put aside, that it may be used every month to test the progress of the cure, by showing how much less is the girth of both.

As iodine is the chief remedy on which any reliance can be placed, it must be used both externally and internally at the same time, though in different preparations.

Iodine Ointment.—Take of—

Camphor	1 drachm.
Iodine	½ drachm.
Spirits of wine . . .	10 drops,
(to powder the camphor).	
White ointment . .	1 ounce.

Mix: a small piece of this ointment is to be rubbed steadily and effectually all over the tumour every night before going to bed, a warm bran poultice being laid over the whole to induce absorption. A poultice should also precede the use of the ointment, so as to relax and open the pores of the skin.

Mixture.—Take of—

Hydriodate of potass .	1 drachm.
Infusion of gentian .	8 ounces.
Tincture of ginger .	2 drachms.

Mix: one tablespoonful to be taken four times a day.

Every fourth day the ointment should be intermitted for two days, to allow the skin to recover from the friction. Some practitioners paint the tumour with the tincture of iodine; but the benefit of *friction*, with the stimulating properties of the camphor, add so much to the benefit of the treatment, that we have no hesitation in recommending the ointment as the best means. Three months' steady employment of the above remedies will generally reduce the gland to an almost natural appearance. In obstinate cases, or where, after one or two months' unsteady use of the ointment and mixture, there is no perceptible reduction in the tumour, the local means should be suspended, and one of Pulvermacher's belts or necklaces passed round the throat, one pole of the belt being applied flat to the spine at the nape of the neck, the chain carried once or twice round the neck and over the goitre; and the pole of the other extremity placed on the centre of the tumour. See GALVANISM, MEDICAL.

After wearing the chain for eight or ten days the ointment may be again resumed for another week, and again interrupted, to make way for the Pulvermacher's band; and so on in alternation till the cure is effected,

GOLDEN OINTMENT.—A bright yellow ointment, made by finely powdering red precipitate, and mixing it with spermaceti ointment. This ointment, made with 1 drachm of the red oxide of mercury to 1 ounce of spermaceti ointment, forms an admirable application for the chronic inflammation of the eyelids, to which some scrofulous persons are liable. A patent medicine under the name of Golden Ointment for the eyes is precisely the same as that given above.

GOMPHOSIS.—An articulation similar to a nail in a board. The articulation of the teeth in the two jaws.

GONORRHŒA.—A flowing of the seminal secretion. A misnomer, as we shall show when we treat of this disease under the letter V, which see.

GOOSEBERRY.—The *Ribes grossularia*, as this grateful and wholesome fruit is botanically called. When ripe, the gooseberry is one of the most cooling and refreshing of our English fruits, and, besides being acidulous, is also slightly laxative; and in consequence of the large proportion of sugar it contains, the gooseberry makes an excellent wine, which greatly resembles champagne, from the quantity of carbonic acid it contains.

GORGET.—The name of an old-fashioned instrument used in the operation of lithotomy.

GOULARD EXTRACT, OR GOULARD WATER.—A name given to a preparation of the extract of lead and water, made in the proportion of ½ ounce of the extract of lead to an imperi pint of distilled water, used as a lotion f inflamed eyes.

GOULARD'S OINTMENT.—A cooling cerate, either made by mixing finely powdered sugar of lead with white ointment, or by rubbing extract of lead into th ointment.

GOURD, OR VEGETABLE MARROW.—See PUMPKIN, and VEGETAB MARROW. A good edible food.

GOUT.—This disease, which physici have classed as one of those belonging diseases of the blood, has long been a proach to the practice of physic, from uncertain and erratic manner in which has been customary to treat it; symptoms being regarded as the dis while the true characters of the compl like its cause, have been too frequen lost sight of.

The modern theory of the CAUSE is it depends upon some specific mo principle existing in the blood, the sequence of a faulty assimilation of elements of nutrition, and that such, cumulating in the blood, finally leads that chain of morbid actions to which give the name of gout. The

SYMPTOMS commence with loss of petite, lassitude, and torpor, with col and numbness of the extremities, nating with prickings in the joi cramps, fulness of the veins, and tu faction of the limb, principally of the About two o'clock in the morning paroxysm usually commences with an cruciating pain in the ball of the toe, followed soon after by rigors, and most acute symptoms of intense bo perturbation, till, after some eighteen twenty hours, or till the evening the first burst of pain, the suffering ha gradually increased to a point of nating agony, the pain begins slowly abate, a perspiration more or less pro breaks out over the body, and the pati is enabled to draw his breath, and that his tortures have passed for the when, the racked mind and exhausted released from their stretch of tor the freed patient falls into a pro sleep. When he at length wakes this happy oblivion, he finds his shapely limb disfigured out of all reco tion by the swelling which has set in, by the inflamed appearance of the Every evening, for a succession of nig he has a return of pain and fever, but to the extent of the first attack, w

till the morning, when the pain
subsides.
st attack, with the nightly return
aroxysm, but less severe for a
umber of occasions—sometimes
v, on others amounting to a long
returns—constitutes what is
the disease of gout. Some per-
pare the pain of an attack to
the bones of the foot dislocated
nd a stream of hot water poured
isitive parts. Gout was at one
ight to be a disease peculiar to
nd luxurious; and though it does
uently occur in those who live
n rich dishes, indulge in large
of generous wine, and take little
t is also not unfrequently found
e harder-worked and less affluent
society; but only in those who
of large quantities of malt or
liquors, for among the ill-fed,
erate, and hard worked, gout is
rd of. It is a well-known fact,
people who consume the sour
drink pure spirits, as the
Germans, and Scotch, are sel-
m to be affected by this disease;
se who take large quantities of
g, sweet wines of Portugal, or
much malt liquor, as the aris-
orters, draymen, and coal-whip-
is country, are liable to it in an
anner.

EATMENT is divided into that
e paroxysm, and the means
uring the intervals of the attack;
for the double object of pre-
recurrence, and, if possible, to
the poisonous formations pecu-
disease. As a general rule, but
licine is required during the
or fit of the gout. Confining
t, if young, to a spare diet; if a
, and advanced in life, by mo-
the amount and quality of his
avoiding all causes of irritation,
he limb warm and quiet, the
quil, and the body in a state of
e the most important general
carry out these intentions, the
hould be kept warm in bed, the
ered with a thick layer of the
ool or cotton, the whole being
by a silk handkerchief, and if
carefully suspended by a broad
n the neck; the effect of the
ing to keep the limb in a kind
vapour-bath, that material keep-
around the part, all the moisture
from the cuticle. To allay any irritation which might arise from crudities in the stomach or bowels, a five-grain blue pill may be given every other night for two or three times, followed the next morning by a black draught; or one of the following pills taken every night, and a seidlitz powder every morning. Take of—

Compound colocynth pill	½ drachm.
Blue pill	½ drachm.
Extract of henbane .	1 scruple.

Mix, and divide into 12 pills. To relieve the dry heat of the skin, the following diaphoretic mixture should be given frequently during the night and day, while the patient is awake. Take of—

Bicarbonate of potass	2 drachms.
Camphor water . . .	4 ounces.
Ipecacuanha wine . .	½ ounce.
Spirits of sweet nitre .	½ ounce.
Spirits of mindererus .	3 ounces.
Syrup of saffron . .	2 drachms.

Mix: two tablespoonfuls to be given every four hours.

When the bowels are naturally sluggish, and the presence of much feculent matter is suspected, a more powerful purgative must be employed, such, for instance, as the following. Take of—

Powdered aloes . . .	24 grains.
Powdered scammony .	12 grains.
Powdered rhubarb . .	24 grains.
Calomel	18 grains.
Soap	sufficient to

make a mass, which divide into fifteen pills; two to be taken night and morning till they act freely, followed, if necessary, once a day, by a black draught.

In the intervals, the treatment consists in a strict regulation of the diet, the avoidance of all animal food, fermented liquors, and other exciting causes of the disease; the adoption of a vegetable dietary, if possible, with exercise, the use of the flesh-brush, tonics, aperients, occasional chalybeates, and the employment of the Bath waters. The article to which medical men have of late years looked with the greatest confidence in the treatment of gout in this period of the disease is colchicum; but though some physicians profess to have obtained the most signal advantages from its use, others have been unable to realize any beneficial results. Much, however, depends upon the manner in which it is given, and also on the time of taking it.

As colchicum is a medicine often attended with great risk in its employment, as the best means. Three months' steady employment of the above remedies will generally reduce the gland to an almost natural appearance. In obstinate cases, or where, after one or two months' unsteady use of the ointment and mixture, there is no perceptible reduction in the tumour, the local means should be suspended, and one of Pulvermacher's belts or necklaces passed round the throat, one pole of the belt being applied flat to the spine at the nape of the neck, the chain carried once or twice round the neck and over the goitre; and the pole of the other extremity placed on the centre of the tumour. See GALVANISM, MEDICAL.

After wearing the chain for eight or ten days the ointment may be again resumed for another week, and again interrupted, to make way for the Pulvermacher's band; and so on in alternation till the cure is effected,

GOLDEN OINTMENT.—A bright yellow ointment, made by finely powdering red precipitate, and mixing it with spermaceti ointment. This ointment, made with 1 drachm of the red oxide of mercury to 1 ounce of spermaceti ointment, forms an admirable application for the chronic inflammation of the eyelids, to which some scrofulous persons are liable. A patent medicine under the name of Golden Ointment for the eyes is precisely the same as that given above.

GOMPHOSIS.—An articulation similar to a nail in a board. The articulation of the teeth in the two jaws.

GONORRHŒA.—A flowing of the seminal secretion. A misnomer, as we shall show when we treat of this disease under the letter V, which see.

GOOSEBERRY.—The *Ribes grossularia*, as this grateful and wholesome fruit is botanically called. When ripe, the gooseberry is one of the most cooling and refreshing of our English fruits, and, besides being acidulous, is also slightly laxative; and in consequence of the large proportion of sugar it contains, the gooseberry makes an excellent wine, which greatly resembles champagne, from the quantity of carbonic acid it contains.

GORGET.—The name of an old-fashioned instrument used in the operation of lithotomy.

GOULARD EXTRACT, OR GOULARD WATER.—A name given to a preparation of the extract of lead and water, made in the proportion of ½ an ounce of the extract of lead to an imperial pint of distilled water, used as a lotion for inflamed eyes.

GOULARD'S OINTMENT.—A cooling cerate, either made by mixing finely powdered sugar of lead with white ointment, or by rubbing extract of lead into the ointment.

GOURD, OR VEGETABLE MARROW.—See PUMPKIN, and VEGETABLE MARROW. A good edible food.

GOUT.—This disease, which physicians have classed as one of those belonging [illegible] diseases of the blood, has long been a reproach to the practice of physic, from [illegible] uncertain and erratic manner in which [illegible] has been customary to treat it; [illegible] symptoms being regarded as the disease, while the true characters of the complaint, like its cause, have been too frequently lost sight of.

The modern theory of the CAUSE is [illegible] it depends upon some specific morbid principle existing in the blood, the consequence of a faulty assimilation of the elements of nutrition, and that such, accumulating in the blood, finally leads [illegible] that chain of morbid actions to which [illegible] give the name of gout. The

SYMPTOMS commence with loss of appetite, lassitude, and torpor, with coldness and numbness of the extremities, alternating with prickings in the joints, cramps, fulness of the veins, and tumefaction of the limb, principally of the leg. About two o'clock in the morning the paroxysm usually commences with an excruciating pain in the ball of the great toe, followed soon after by rigors, and the most acute symptoms of intense bodily perturbation, till, after some eighteen [illegible] twenty hours, or till the evening after the first burst of pain, the suffering having gradually increased to a point of culminating agony, the pain begins slowly [illegible] abate, a perspiration more or less profuse breaks out over the body, and the patient is enabled to draw his breath, and [illegible] that his tortures have passed for the time; when, the racked mind and exhausted body released from their stretch of torment, the freed patient falls into a profound sleep. When he at length wakes from this happy oblivion, he finds his [illegible] shapely limb disfigured out of all recollection by the swelling which has set in, [illegible] by the inflamed appearance of the cuticle. Every evening, for a succession of nights he has a return of pain and fever, but [illegible] to the extent of the first attack, which

s till the morning, when the pain
r subsides.
st attack, with the nightly return
aroxysm, but less severe for a
umber of occasions—sometimes
w, on others amounting to a long
returns—constitutes what is
s the disease of gout. Some per-
pare the pain of an attack to
l the bones of the foot dislocated
ind a stream of hot water poured
nsitive parts. Gout was at one
ught to be a disease peculiar to
nd luxurious; and though it does
quently occur in those who live
n rich dishes, indulge in large
s of generous wine, and take little
it is also not unfrequently found
e harder-worked and less affluent
f society; but only in those who
of large quantities of malt or
s liquors, for among the ill-fed,
erate, and hard worked, gout is
rd of. It is a well-known fact,
e people who consume the sour
r drink pure spirits, as the
Germans, and Scotch, are sel-
wn to be affected by this disease;
se who take large quantities of
g, sweet wines of Portugal, or
much malt liquor, as the aris-
porters, draymen, and coal-whip-
is country, are liable to it in an
nanner.

REATMENT is divided into that
he paroxysm, and the means
luring the intervals of the attack;
r for the double object of pre-
recurrence, and, if possible, to
e the poisonous formations pecu-
e disease. As a general rule, but
dicine is required during the
or fit of the gout. Confining
nt, if young, to a spare diet; if a
r, and advanced in life, by mo-
the amount and quality of his
avoiding all causes of irritation,
the limb warm and quiet, the
nquil, and the body in a state of
re the most important general
o carry out these intentions, the
hould be kept warm in bed, the
ered with a thick layer of the
ool or cotton, the whole being
l by a silk handkerchief, and if
carefully suspended by a broad
m the neck; the effect of the
ing to keep the limb in a kind
vapour-bath, that material keep-
l around the part, all the moisture
from the cuticle. To allay any irritation which might arise from crudities in the stomach or bowels, a five-grain blue pill may be given every other night for two or three times, followed the next morning by a black draught; or one of the following pills taken every night, and a seidlitz powder every morning. Take of—

Compound colocynth pill	½ drachm.
Blue pill	½ drachm.
Extract of henbane .	1 scruple.

Mix, and divide into 12 pills. To relieve the dry heat of the skin, the following diaphoretic mixture should be given frequently during the night and day, while the patient is awake. Take of—

Bicarbonate of potass	2 drachms.
Camphor water . . .	4 ounces.
Ipecacuanha wine . .	½ ounce.
Spirits of sweet nitre .	½ ounce.
Spirits of mindererus .	3 ounces.
Syrup of saffron . .	2 drachms.

Mix: two tablespoonfuls to be given every four hours.

When the bowels are naturally sluggish, and the presence of much feculent matter is suspected, a more powerful purgative must be employed, such, for instance, as the following. Take of—

Powdered aloes . . .	24 grains.
Powdered scammony .	12 grains.
Powdered rhubarb . .	24 grains.
Calomel	18 grains.
Soap	sufficient to

make a mass, which divide into fifteen pills; two to be taken night and morning till they act freely, followed, if necessary, once a day, by a black draught.

In the intervals, the treatment consists in a strict regulation of the diet, the avoidance of all animal food, fermented liquors, and other exciting causes of the disease; the adoption of a vegetable dietary, if possible, with exercise, the use of the flesh-brush, tonics, aperients, occasional chalybeates, and the employment of the Bath waters. The article to which medical men have of late years looked with the greatest confidence in the treatment of gout in this period of the disease is colchicum; but though some physicians profess to have obtained the most signal advantages from its use, others have been unable to realize any beneficial results. Much, however, depends upon the manner in which it is given, and also on the time of taking it.

As colchicum is a medicine often attended with great risk in its employment, it should only be taken under the advice of a medical man, and never given till the bowels have been previously well acted on. The following is a very good combination of the drug, and is both a safe and effective preparation. Take of—

Epsom salts	½ ounce.
Carbonate of magnesia	2 drachms.
Mint water	5 ounces.

Mix, and add—

Laudanum	1 drachm.
Wine of colchicum . .	3 drachms.

Mix: one tablespoonful to be given every four or six hours in the day.

By the application of cold, or from an injudicious treatment, gout is sometimes driven from the surface, or the extremities, and suddenly manifests itself by attacking some internal organ, causing most serious and often fatal consequences. In this manner when it attacks the stomach, there are violent pains in that organ, increased by pressure on the part, attended with sickness, vomiting, and a sense of faintness, with a weak and fluttering pulse. These symptoms should be immediately met by giving half a drachm of the carbonate of soda in a cupful of warm water, as warm as it can be drunk; and if there is considerable exhaustion, by a small quantity of brandy, or else by a teaspoonful of sal volatile in a wineglass of cold water; at the same time the feet are to be plunged into a mustard foot-bath, while a mustard poultice is to be laid on the pit of the stomach, or else a folded flannel, wrung out of boiling water, and sprinkled with turpentine, applied instead of the poultice. The object for which these remedies are employed is to draw the gout from the stomach, and induce it to return to the part from whence it had fled, or to some other member or locality on the extremities.

A steady course of tonics, such as quinine and iron, is to be continued during the intervals, with exercise, cold bathing, and friction with the flesh-brush. All acescent wines, particularly port and claret, are to be avoided, and Madeira and sherry substituted; while those accustomed to malt liquor should use a little pure spirits and cold water as a beverage at meals.

While the treatment for retrocedent gout, or that form of the disease which flits from place to place, is to commence by giving warm, aromatic stimulants, as already stated, with ammonia, ether, assafœtida, camphor, and musk, if necessary assisted by mustard and turpentine.

GOUTY CONCRETIONS, or Chalk-stones, as these earthy deposits are popularly called, are composed of *urate of soda*, which, being remarkably insoluble, is, when once thrown out by the vessels, and deposited in the *bursæ* of the joints, in the ligaments, and cellular tissue under the cuticle, extremely difficult to remove by reabsorption. It is the deposition of these earthy particles which gives that singular knotty and disfigured appearance to the fingers and toes of persons habitually liable to gout. The only agent known to produce any effect on these depositions, by causing their absorption, was benzoic acid, but that had to be given in such large and repeated doses that few stomachs could endure the remedy. Nature, however, occasionally effects a temporary cure by the bursting of the skin over the distended part, and by liberating a perfect show of chalk-stones of all sizes, from that of a pin's head to a small bean.

Of late years, however, the profession has found in galvanism a remedial agent in gout of singular power and efficacy, and which, by means of Pulvermacher's chain bands and belts, has been employed with surprising success, both in allaying the intense pain suffered in the first part of the paroxysm, and subsequently in stimulating the vessels to absorb the depositions thrown out in old-standing cases the urate of soda. In the acute stage of the disease the galvanism generated by these portable batteries has the effect of not only subduing the pain, and thus obviating the necessity for opium, but almost immediately induces a deep and refreshing sleep. The wearing a belt or band of a sufficient galvanic power for one or two hours is frequently sufficient to effect these great and beneficial results. For the purpose of producing absorption, however, it is necessary to keep up a mild and continuous current of the galvanic fluid for several weeks. According as the gout is in the foot or hand will depend the application of the chain or belt; in either case one pole must rest on the spine, while the length of the belt is carried spirally round the limb, across the affected part, with the opposite pole resting on the tumefaction. The effect of these galvanic bands of Mr. Pulvermacher's in subduing the intense pain of an attack of gout, and inducing a deep sleep in the patient, is a fact as remarkable in a scientific as in a curative point of view. See Galvanism, Medical.

GOWLAND'S LOTION.—A cosmetic,

some years ago held in great esteem as a wash for the face in cases of freckles, pimples, and other eruptive affections of the skin. The Gowland's lotion is made by adding six grains of corrosive sublimate to every pint of bitter almond emulsion.

GRACISLIS.—A long, thin flexor muscle of the thigh.

GRAINS OF PARADISE, or GUINEA GRAINS.—A variety of the cardamoms, known in the shops as the larger cardamom seeds, the only difference being that the grains of paradise are sold loose, and the common or lesser cardamoms in their capsules. In their medicinal properties the grains are similar to the other, being a warm, aromatic carminative and stimulant.

GRANATE CORTEX.—The bark of the Pomegranate, which see.

GRANULATION.—A term used by surgeons to express the growth of fleshy fibre, which springs up in wounds and ulcers when the process of cure is being effected by the second intention. It is so called from the fact of the flesh springing up in separate particles, like grains or granules. Occasionally, when the system is out of order, and the part weak, the granulations spring up with remarkable rapidity; when such is the case they are called watery granulations, or proud flesh. This excessive and unhealthy activity is easily corrected by a weak solution of bluestone.

GRAPES. See VINE.

GRATIOLA OFFICINALIS.—Hyssop, which see.

GRAVEDO.—A medical term for a sense of cold and oppression in the head.

GRAVEL.—This disease is frequently divided into what is known among medical men as RED and WHITE sand, from the colour of the deposit, the symptoms being alike in both cases, though the nature of the deposit is different, and the treatment opposite.

SYMPTOMS.—These usually commence with a dull, heavy pain about the loins, weariness, and lassitude, frequent desire to make water, accompanied with irritation at the neck of the bladder, with great pain, and often an itching feeling in the glans. The digestion is more or less impaired, with flatulence, constipation, and acidity of the stomach; the skin feels dry and feverish, the tongue is furred, and there is occasional thirst. The urine is generally scanty, high-coloured, and of a great specific gravity; is discharged with much difficulty, has a strong smell, and often becomes turbid on cooling, throwing down, from within an hour of voiding, a sandy precipitate or powder, sometimes red or pink, sometimes white, and occasionally partaking of both colours.

TREATMENT.—In cases of *Red Sand*, or gravel of a red or pink colour, the chief dependence must be placed on a strictly vegetable diet, the frequent use of diluents, such as balm tea and barley water, in which about 10 or 15 grains of bicarbonate of potass, or carbonate of soda, are to be taken every four or six hours; or 10 drops of the *liquor potassæ* may be taken three times a day, in milk or barley water. Gentle exercise should be recommended daily, the flesh-brush used night and morning over the loins, and, as a general drink, soda water, or any of the aërated waters—the saline springs of Carlsbad being regarded as most beneficial in this form of gravel. The composition of this species of gravel, or red sand, is chiefly lithate of ammonia and lithic acid.

The *White Sand* is composed of the phosphates of ammonia, magnesia, and lime, or, as it is chemically termed, the triple phosphates. The TREATMENT in this form of gravel demands a full and generous diet, with strict attention to the stomach and bowels, and the frequent exhibition of small doses of the mineral acids, such as the nitric, muriatic, and nitro-muriatic. The best vehicle in which these can be given is an infusion of camomiles, quassia, calumba, or wormwood, from 3 to 5 drops in a cupful of the infusion being taken four times a day. In all cases of gravel the bowels must be kept open, and the healthy action of the stomach insured by tonics or bitters. A warm bath should be occasionally employed, and in all cases the flesh-brush used to promote an increased action of the skin over the loins. Sometimes the gravel is composed largely of oxalic acid, in which case the diet must be so regulated as to reject all substances containing oxalic acid. When a large quantity of gravel is long retained in the bladder, several particles adhere together, which, forming a nucleus, attracts other particles, till, finally, a calculus or stone is formed, leading to the operation of breaking down, *Lithotrity;* or extraction, *Lithotomy*, which see, and Stone.

GREEN SICKNESS, OR CHLOROSIS.—This is a disease caused by an unhealthy state of the blood, from the absence of the due quantity of red globules in its composition; in consequence of which the body becomes pale and emaciated.

SYMPTOMS.—Listlessness and fatigue after the slightest exertion, pains in the back, loins, and hips, with palpitations, flatulence, and acid eructations. The appetite not only fails, but becomes so depraved that the patient, rejecting all natural food, eagerly devours lime, chalk, slate pencil, cinders, and things of the most opposite nature. After a time the lips become perfectly white, a livid areola or circle appears round the eyes, while the countenance assumes a greenish-yellow hue, from whence the name of the disease is derived. The feet and legs finally become cold and puffy, or œdematous, and a state of low, hectic fever supervenes.

The TREATMENT consists in supplying the body with those articles which will increase the quality and quantity of the blood, and restore to it the principles of which it has been robbed by diseased action. For this purpose the diet should be full and generous, with a limited supply of wine, the employment of iron, and the exhibition of tonics, and by the employment of emmenagogues—such as Griffith's Mixture, which see—to excite a special action on the womb. Besides these means, exercise, without fatigue, is to be adopted, salt water bathing, the free use of chalybeate waters, especially those of Tunbridge Wells. But that on which the greatest reliance is to be placed is the agency of medical galvanism, the daily transmission of shocks through the pubic region, and, in some cases, by the constant wearing of one of Pulvermacher's galvanic belts. See GALVANISM, MEDICAL, and WOMB, DISEASES OF.

GREGORY'S POWDER.—A prescription of the celebrated Dr. James Gregory, of Edinburgh. The Doctor was in the habit of frequently using it himself, and prescribing it so largely for his patients, that in time every chemist's shop in Scotland prepared it for the use of the public. It is a very excellent stomachic, antacid, and carminative, and may be given with equal confidence to children as to adults.

Gregory's powder is made by mixing intimately, in a Wedgwood mortar, 1 ounce or part of powdered Jamaica ginger, 2 ounces or parts of powdered rhubarb, and 6 ounces or parts of calcined magnesia. The dose is from a teaspoonful to a tablespoonful, in a little plain or peppermint water, two or three times a day.

GREGORY'S PILLS.—The compound colocynth pills are those which, in Scotland, pass under the name of Gregory's pills. When properly made, and not long kept, this is one of the best laxative pills in the Pharmacopœia, and may be taken with safety by both males and females, and in nearly every condition of the body. The dose is from one to three pills.

GREY POWDER, professionally known as the *Hydrargyrum c. Creta.* This very useful mercurial alterative powder is composed of mercury and chalk rubbed together, till all the globules of the mercury disappear, the whole being reduced to a state of protoxide of mercury.

MEDICAL PROPERTIES.—It would be impossible to enumerate all the diseases and ailments in which grey powder may not be usefully employed, either alone or in combination with scammony and rhubarb. Grey powder acts as an alterative, sialogogue, and as an aperient. As an alterative the dose is from 1 to 2 grains; as a sialogogue, from ½ a grain to 1 grain, in combination with kino; and as an aperient, from 4 to 8 grains. See QUICKSILVER.

GRIFFITH'S MIXTURE.—A very highly esteemed emmenagogue mixture, particularly serviceable in all cases of uterine retention, where the system is weak, the blood poor, and the body debilitated,—such as in chlorosis, or green sickness. Take of—

Myrrh (in powder) . .	2 drachms.
Sugar	2 drachms.
Carbonate of potass .	1 drachm.
Sulphate of iron (purified)	50 grains.
Spirits of nutmeg . .	1 ounce.
Water	18 ounces.

Mix the myrrh, potass, and sugar together in a mortar, adding the water by degrees; lastly, dissolve the sulphate of iron, pour the whole into a bottle, add the spirit of nutmeg, shake them well together, and keep the bottle closely corked. The dose is two tablespoonfuls three times a day.

GUAIACUM.—The resin of a West Indian tree, called the *Lignum vitæ*, a plant belonging to the Natural order *Zygophyllaceæ*.

PREPARATIONS.—The forms in which the guaiacum—*holy wood*, or *wood of life*, as the tree is differently called—is found in the shops are—first, the raspings of the wood itself (*lignum guaiaci*); the resinous gum obtained from the wood (*gumi guaiaci*); the powder of this gum-resin (*pulvis guaiaci*); two tinctures, one with and the other without ammonia (*tinctura guaiaci*); and the mixture (*mistura guaiaci*).

Medical Properties and Uses.—All the preparations of this plant act in one manner on the human system—namely, as a diaphoretic, to produce perspiration or sweating; and whatever benefit they exercise is produced by that action on the cuticle. Guaiacum is of service in all affections of the skin, especially chronic cuticular affections, in syphilis, and particularly in rheumatism. Its great action on the skin, however, is shown most effectively in the latter class of chronic disease, for which, in fact, it was at one time regarded as a *specific*. The rasped wood is used as a decoction, either alone or with sarsaparilla and dulcamara, in affections of the skin, the dose being a cupful three times a day.

LIGNUM VITÆ, OR GUAIACUM PLANT.

For rheumatism it is customary either to take 10 grains of the powdered gum with a teaspoonful of milk of sulphur three times a day, or two teaspoonfuls of the tincture in a little gruel night and morning, or two tablespoonfuls of the following mixture three times a day, and a Plummer's pill night and morning.

Mixture of guaiacum.—Take of—

Powdered gum arabic .	½ drachm.
Powdered guaiacum .	½ drachm.
Powdered nitre . . .	½ drachm.
Cinnamon water . .	6 ounces.

Rub down the above articles smoothly in a mortar, put them in a bottle, and add—

Laudanum	1 drachm.
Tincture of hyoscyamus	1 drachm.

Mix. See Rheumatism.

GUINEA-WORM, or the *Filaria medinensis*, is one of the parasites infesting the human body in all tropical regions, though from the greater frequency in which it is found in Western Africa it has received the name of the Guinea-worm. This reptile, that not unfrequently extends to the length of *six feet*, has a black head, and a white body, tapering to a fine point; the average diameter is one-twelfth of an inch: altogether it looks not unlike the string of a violin, being remarkably tenacious and tough. All persons, black or white, residing in tropical climates, if exposed to the influence, are liable to be infested with these parasites, which attack the feet, legs, back, or any part of the body coming in contact with the water supposed to contain the embryo, which works its way under the skin, where it lies in a sac in the cellular tissue, giving no irritation or indication of its presence till developed long enough to escape, when, after causing much heat, pain, and annoyance in the part, and inducing a number of pimples, the head appears under one of the eruptions. It is calculated that the Guinea-worm grows at the rate of an inch a week till it acquires its full growth, upon which it perforates the skin at one of the pustules.

The treatment consists in making an incision, so as to expose the head of the worm, under which a strip of adhesive plaster is to be passed, which is to be used as a reel, the body of the reptile being every day wound round the plaster till the whole is extracted. If this plan is not carefully managed, the body may be broken, when a great deal of trouble will ensue in getting rid of the portion left behind, which can only be done by poulticing and suppuration. See Chigoes.

GULLET.—The continuation of the pharynx, and the connecting isthmus between the mouth and the stomach; in other words, the first portion of the alimentary canal. The œsophagus, or gullet, is a long, muscular tube, commencing at the end of the pharynx, and terminating at the cardiac or upper end of the stomach.

The gullet is composed of three coats: the inner, or most important, called the muscular coat, consists of three sets of muscles, the fibres of each set running in different directions; that is, one set runs round the tube in regular lines, the *transverse;* another holds a straight downward direction, or the *perpendicular;* and the third a diagonal course, or the *oblique.* A continuation of the lining membrane of the mouth invests the gullet, receiving the name of the mucous membrane. The food, as we have shown in the article on Digestion, having been prepared by the mouth, teeth, and salivary glands, is carried by the act of swallowing or *deglutition* into the pharynx and top of the gullet, along which it passes to the stomach, *not* by its weight, or like a substance dropped down a well, which finds the bottom by mere gravitation, but is grasped in succession by the different muscles of the organ, and propelled by muscular action along the tube. As the upper part of the gullet is the narrowest portion of the whole length, it is at that spot where obstructions during swallowing most frequently occur,—an accident which generally results from hasty eating, and an attempt to swallow before the food has been sufficiently masticated. Children, in their attempt to swallow small potatoes, plum stones, pieces of apple, or undivided masses of meat, are very liable to an accident of this kind, when, as the obstruction presses forward on that portion of the windpipe where the rings are not perfect, all air is cut off from the lungs, and the person is in danger of suffocation, unless the obstruction is *immediately* removed. If this is not effected by giving the person a sharp slap between the shoulders, the fingers should be instantly inserted into the mouth, and the article, if possible, grasped and pulled out. If, however, it has entered the gullet, and cannot be reached by that means, the head is to be bent back so as to place the throat on the stretch, and a probang, properly greased, passed down the gullet, and the object pushed into the wider part of the tube. As a probang is seldom to be met with, an uncut quill, greased, and carefully passed in the same manner, will answer equally well; or a thin slip of whalebone, about a foot long, as thick round as a pen, and to the end of which a little pad of linen has been securely tied, may be used for the same purpose. When a fish-bone lodges in the gullet, a few small masses of the crumb of new bread should be swallowed in succession, like pills, till the cause of irritation is carried forward. Sometimes, when the bone is visible, it may be easily removed by a pair of dressing forceps; but this is an operation which only a medical man could perform. The muscles of the gullet are liable to spasms, producing pain, and a sense of a round ball being lodged in the passage: this is particularly the case in hysteria, and may generally be overcome by slapping the person between the shoulders, or throwing cold water suddenly in his face.

GUM.—A vegetable substance found in many plants, and a primary form of all vegetable textures. Gum is soluble in water, and insoluble in alcohol; is chemically composed of carbon, hydrogen, and oxygen, resembling in its principles starch and sugar; and is, moreover, one of the heat-promoting foods. There are several varieties of gums, but the purest of all are those yielded by the *Acacia vera*, of which the gum arabic is the finest and best. As a medicinal agent, gum is highly useful as a demulcent in cases of colds, to shield the membrane of the larynx, fauces, and œsophagus from the irritation of the air. Gum, when dissolved in water, is called Mucilage, which see.

GUMS, THE.—The name given to the elastic cellular tissue and mucous membrane running round either jaw, and covering the alveolar processes, or cells which contain the teeth. The gums are liable to several diseases, such as inflammation, ulceration, scurvy, and abscesses, caused either by the cutting of the teeth (both in infancy and adult age), from the irritation of decayed teeth, and from many causes which affect the stomach and bowels.

In cases of inflammation of the gums, the application of one or two leeches, with some mild aperient medicine; a low and farinaceous diet, and frequently washing the mouth with warm water, will in general be found sufficient to restore them to a healthy state. In applying leeches to the gums, the proper leech-glass should always be employed, or a large goose-quill may be extemporized into an article to answer the same purpose, by making a small opening at the end for the head of the leech to come through, and by cutting out a piece from the side, near the pith and feather, to admit it into the tube.

For the scorbutic affection to which the gums are liable, see SCURVY.

One of the most painful affections of the gums are those tedious abscesses known as gum-boils, which generally proceed from some derangement of the bowels, or depraved state of the stomach. The *treatment* of gum-boils consists in correcting the state of the system on which they depend, and by encouraging the formation of the abscess by a hot poultice on the cheek or jaw, and, as it approaches maturity, by a roasted fig cut open and placed hot over the swelling, and, as soon as the abscess points, by opening it with a bistoury or sharp penknife, and, finally, by encouraging the discharge by washing the mouth often with hot water. See Thrush, and Teething.

The gums in a healthy state of the system are always of a florid colour, pale in anæmia and chlorosis, livid when the lungs are much oppressed and breathing is difficult, and swollen and dark in scurvy.

GUM, RED. See Infants, Diseases of.

GUNSHOT WOUNDS.—This subject is so purely a branch of military surgery that we shall only give a few general directions how to treat an accidental injury from firearms.

If the wound bleeds much it must be sponged with cold water, not only to check the hæmorrhage, but to cleanse it of any sand or dirt that may have been carried into it; the patient's anxiety must at the same time be soothed, and if there is much exhaustion, a little wine and water is to be given, or a few drops of spirits of lavender in water. When a ball or bits of cloth are carried into the wound, they must be carefully removed by the dressing forceps, or by the fingers. If, however, they are too deep to be reached without causing much suffering, they must be left till suppuration sets in, when they will generally become loosened and forced towards the opening. When the bleeding has been stopped, a pledget of lint, or a slip of piline soaked in cold water, is to be applied to the part, and the patient kept perfectly quiet, the simple water dressings being continued. If there is much pain and restlessness, a dose of 1 or 2 grains of opium should be given, and when, after a few days, inflammation sets in, the dressing should consist of lukewarm water, and when suppuration commences, the process is to be encouraged by warm poultices, and, if necessary, mild stimulating lotions, till all the foreign bodies have been discharged. During the whole process the patient must be kept low, the bowels well acted on, great quietude observed, and an opiate given at bedtime, if there is much restlessness and want of sleep. Throughout the whole treatment, *simplicity* is the great source of success, nature being allowed every opportunity of assisting the cure. When the bone has been splintered by a ball, amputation almost always becomes necessary. See Wounds.

GUTTA.—The Latin for a Drop, which see.

GUTTA SERENA. See Amaurosis.

GUTTA PERCHA.—The concrete gum-resinous juice of the *Isonanda gutta*, a tree, native of the Indian Archipelago. The gutta percha is obtained by felling the largest trees, stripping off the bark, and collecting the juice that exudes from the denuded trunk and branches in plantain leaves; the juice so obtained, on exposure to the sun, soon becomes a concrete mass.

When brought to this country in crude masses of several pounds weight, it is purified by boiling water, and by means of powerful machinery rolled into sheets, and fashioned into utensils and appliances of every shape and kind; and owing to its plastic capabilities, its resistance of water—being, in fact, waterproof,—and its non-conducting properties, gutta percha has become an article of immense value and importance, not only in the arts, but in all the purposes of daily life.

GYPSUM.—An earth largely used in the arts; a hydrated sulphate of lime, or a preparation of chalk water, and sulphuric acid. When gypsum is exposed to heat, its water is driven off, and a powdery substance obtained, known as Plaster of Paris. It is only used professionally for taking casts of ulcers, malformations, and masks for phrenological and surgical purposes. See Lime.

H

H.—The eighth letter of the alphabet, and as a numeral, with the Romans, stood for 200, and with a dash over it, thus ($\overline{\text{H}}$), for 200,000; while with the Greeks it signified 8.

HABIT.—A term used by medical men to express a certain condition of body,—as a state of repletion or excess, called a plethoric or full habit of body, or a condition of reduced health and vigour. Where no provision is made for anything beyond the mere exigencies of life, such a state, the opposite of the former, is denominated a spare habit of body. The term is also used in a moral sense,—as good or bad, evil, vicious, or depressed habits,—but with such an interpretation this work has nothing to do.

HADDOCK.—A well-known fish, easy of digestion, light, and nutritious. The haddock, like all white-fleshed fish, is almost destitute of oil; the great difference from the flesh of birds and animals lying in their larger proportion of water; thus, in 100 parts of cod, and such kinds of fish, there are nearly eighty per cent. of water to twenty of nutritive matter, the latter consisting of fourteen parts of albumen and six of gelatine. See INVALIDS, FOOD OF.

HÆMA.—A Greek word, signifying blood, and from which root nearly all the following words are derived.

HÆMATEMESIS.—Vomiting or spitting of blood: a discharge of blood from the *stomach;* a fact generally distinguished by the dark colour and nature of the blood thrown up, and by its being often mixed with the contents of the stomach. The only other disease that can be confounded with this is hæmoptysis, or the spitting of blood from the *lungs.* See VOMITING OF BLOOD.

HÆMATOCELE.—A tumour turgid with blood; a soft, discoloured, or livid tumour or swelling of one or other of the testicles; the result of kicks or blows, or other injuries, by which the blood from some ruptured vessel is poured out between the coats of the *scrotum,* causing a large, painful, and fluctuating swelling, which has in general to be treated like the disease called hydrocele, by puncturing the testicle, and, by means of a silver tube, drawing off the effused fluid.

HÆMOPTYSIS.—A discharge of blood from the lungs or bronchial tubes, and generally distinguished by its bright, florid appearance, and by being frothy, and mixed with mucus and saliva. See SPITTING OF BLOOD.

HÆMORRHOIDS. See PILES.

HÆMORRHAGE.—A discharge of blood from any part, whether spontaneous or caused by accident. The blood effused from a wound in battle, from an operation, or the accidental puncture of the finger with a knife, is equally called a hæmorrhage. For the convenience of the subject, surgeons have divided hæmorrhage into the *internal* and the *external.* Of these the internal are the most important, as we have no satisfactory means of knowing exactly the amount of blo lost, the only guide being its exhausti effects on the pulse. Of these, the mo important are bleeding from the stom or from the lungs. The internal hæmo rhages that occur from gunshot wou stabs with small swords, or bayon belong entirely to military surgery; wh the external hæmorrhages from accid will be treated of under the arti Wounds, and Varicose Veins, which s As general rules in all cases of bleedi however, the following directions sho be complied with. When the blood poured out in any considerable quanti the trunk of the nearest artery should *compressed,* so as to cut off the supply the part, and give time for the inju vessels to be tied. Thus, when the fing or hand are the parts from whence t bleeding flows, pressure should be ma on the arteries of the wrist, particul on the vessel where the pulse is usu felt. If above the hand, pressure mu be made on the brachial artery, or t artery of the arm, at about a third bel the shoulder. In the same manner, the lower extremities are injured, t arteries must be compressed in the sa way, either by the hand, a bandage, by a proper apparatus. See TOU QUET.

If the artery from which the bl escapes is a large one, it must, when t hæmorrhage has been suppressed by pre sure, be caught by a pair of sharp-poin forceps or a *tenaculum,* gently pulled o a short distance, and so kept till a assistant ties it with a piece of silk common household thread, as directe under Amputation, which see. T arteries only require to be tied, and th will always be known by the blood issui from them in jerks or leaps, and being a brighter colour; while from veins flows like water, and is dark in colo The one, two, or three arteries, accordi to the importance of the injury, havi been secured, the wound is to be wash with a sponge and cold water, closed, a the edges of the cut or laceration ke together, either by stitches or strips of hesive plaster, and the part enveloped b pledget and loose bandage. In cases o more trifling nature, the flow of blo may be checked by the applicatio styptics, or powerful astringents. O these there are many articles in use, bu few that any absolute reliance can b placed in. Burnt alum, caustic, Friar's balsam, and ice, or the application of col are among those most generally used. See Styptics, and Wounds.

HAGGIS.—A favourite Scotch dish,—indeed, it may be called a national one,—but which, however savoury to the nostrils when first opened for the meal, requires both young and vigorous appetites to digest without subsequent reproach or inconvenience. The haggis is made by mincing finely, after long boiling, a lamb or calf's pluck, heart, &c., mixing this mince with scorched oatmeal, onions, a small quantity of beef suet, salt, pepper, and some good strong stock or gravy, and putting the whole into a sheep's paunch or stomach, carefully tied at both ends, and of which it fills about two-thirds, the rest of the space being left for the expansion of the steam generated by the boiling to which it is subjected for three or four hours.

HAIR, THE.—This tegumentary appendage of the body appertains more properly to the skin than to any tissue or part of the animal frame, as it takes its root, nourishment, and diseases from that investing structure, and ranks with the horns, hoof, and nails of animals. The hair is a dry, elastic, insensible, filamentous texture, common as a more or less complete covering to all warm-blooded animals, each individual hair or filament being enclosed in a cellular membrane, and having a root of a cylindrical form, supplied with a nerve, artery, and vein; the bulb, or starting-point of each hair, with its vessels of nutrition, being enclosed in a capsule, which contains a fluid specially dedicated to its preservation; the colour of the hair, its harshness or pliability, depending upon a peculiar colouring matter secreted beneath and around the follicles or glands, from which the hairs spring.

Besides acting as a warm, elastic, non-conducting covering to the lower animals, the hair in man is not only an adornment to his body, but a substance affording him special and great benefits. It acts as a thatch and protection to his head, guarding it in a remarkable manner from the influence of the sun and the effects of electricity; and when allowed to grow in sufficient quantity round the mouth and over the throat and chest, no doubt acts as a protection to the organs beneath. The total absence of pulmonary affections among the people of Russia and those northern countries of Europe where the hair is allowed to cover the chest and throat—those parts always being exposed to the heats of summer and the snows of winter—is a conclusive proof of the sanitary advantages of hair in such parts. Its uses on the eyebrows and eyelids have been already shown, while in the other parts of the body on which it is found it has special purposes and requirements, one of the most important of which is to lessen the hurt of friction and prevent chafing. Apart from the adornment and utility of the hair, the study of this investment of the body is one of the most interesting in the science of physiology, as by its colour, length, and texture we are enabled to classify the different races of men. Colour greatly influences the texture of the hair, the light or flaxen being regarded as the finest, and the black as the coarsest. The average length of a man's beard is *ten* inches, and of a woman's hair about *thirty* inches; in many cases, however, this length in either case is greatly increased. The colour of the hair almost always corresponds with the colour of the iris, and the darker the hair the stronger is the physical endurance of the body.

There is no part of the frame which will sooner show the consequences of neglect or dirt than the hair; for independent of what it may suffer from any affection of the skin, the hair, particularly of the head, is perpetually attracting dust and impurities, which, by blocking up the pores of the skin or scalp, and retarding or cutting off the flow of natural secretion, soon deteriorates and injures the whole crop. To keep it in a state of healthy and pliant vigour, the hair should be well combed and brushed every day, not only to remove the obstructing scurf and dust which collects about the part where the shaft of the hair issues from the bulb-case, but to stimulate the vessels to supply each filament with its natural oil.

HAIR, DISEASES OF.—As a general rule, the diseases of the hair are only symptomatic of affections of the skin, very few of them resulting from a special infirmity in the hair itself. The most important of such affections is Baldness. This disease, whether complete or partial,—that is, affecting the whole body, or only showing itself in patches of baldness on the scalp,—may occur at all ages, and take place in a few weeks, or it may be the result of many months; the skin at the same time may appear natural, or it may be of an unnaturally white character.

The cause of baldness is a diseased state of the follicles of the hair, by which the bulbs are impoverished, and finally dried up or withered, after which it is impossible for the hair from that follicle ever to shoot up again. When the glands or follicles of the hair are once destroyed, *no application*, however stimulating, will restore them or the hair they should nourish.

The CAUSES of this disease are very numerous,—wearing tight hats, and the long confinement of the perspiration of the head, great heat falling continuously on the head, the application of phosphorus or other chemical preparations of strength, or whatever debilitates the virility of the system; and in females it is often produced by wearing false hair or fronts.

TREATMENT.—This should commence by cutting the hair short, but not shaving the scalp; washing the head with borax and water; and then, after night and morning combing and brushing it well, so as to open the pores of the scalp, rubbing in a small quantity of the following preparation. Take of—

Castor oil	2 ounces.
Essential oil of bitter almonds	10 drops.
Oil of rosemary . . .	2 drachms.

Mix. Every fortnight the head may be re-washed with a solution of borax, and after a short rest the application renewed. Dr. Burgess recommends fumigating the scalp and parts affected by the vapour of iodine, sulphur, mercury, or benzoin, by means of a peculiar apparatus. There can be no doubt, however, that the medical galvanism applied by Pulvermacher's bands would act as a far more effectual stimulant than that produced by any kind of fumigation.

For the falling off of the hair, and that general thinness of the head to which females are so frequently liable, especially after illness or confinement, the same general rules, as respects frequent combing and brushing, must be observed, and if there is much scurf about the roots of the hair, a solution of borax is to be used in the commencement to cleanse the scalp, and when perfectly dry, the following application used night and morning. Take of—

Spirits of rosemary .	2 ounces.
Oil of nutmegs . . .	30 drops.
Oil of lavender . . .	10 drops.
Tincture of cantharides	½ ounce.

Mix. If this should prove too stimulating, it is only to be used once a day, and then, if necessary, mixed in the hand with a little pomatum.

GRAY HAIR is a natural result of a vancing years and weakening pow changing the natural *pigment*, or colo ing matter of the hair, from a dark t light hue, and thereby influencing colour of the hair. The parts of the he on which gray hairs first show themsel are the temples, so called from the La word *tempus*, time. As there can be permanent correction for a natural ca and a declension of strength, it would folly to attempt to remedy an incur misfortune, if what should be a mark reverence and respect can be so call It is only in the young, and where, fr fright and anxiety, the hair has p maturely lost its natural hue, that su remedies as a more generous living, ercise, cold bathing, electricity or gal nism, and early hours, offer any cha of affording benefit.

To those who have not the courage contemplate the approach of age, or wh vanity exceeds their discretion, there is alternative but that of resorting to t not always flattering, and sometimes i jurious, plan of using

HAIR-DYES.—Many articles are vended under this name, some being v greatly extolled for their efficacy: all them, however, depend upon the nit of silver, or other minerals, for whats colour they impart. For ordinary lig hair, combing it frequently with a l comb will in time impart a dark hue the hair; the process, however, is a te one. The following are the most effect of ordinary hair-dyes. 1st. Take of—

Hydrosulphuret of ammonia	1 ounce.
Solution of potass . .	3 drachms.
Distilled water . . .	1 ounce.

Mix in one bottle, marked No. 1.

Take of—

Nitrate of silver . .	1 drachm.
Distilled water . . .	2 ounces

Dissolve in a bottle, and mark No. 2.

A quantity of No. 1 is to be applied the hair by means of a tooth or nail-bru for fifteen or twenty minutes. The ha is then to be laid in folds, and the co tents of No. 2 applied to the damp hai so that every particle of the hair may b moistened. Care must be taken, in apply ing No. 2, that none is spilt on the or face, as a black mark is certain to follow. 2nd. Take of—

Quicklime	1 ounce.

Slake it, by sprinkling a few drops water, and add—

Litharge	3 ounces.

Mix thoroughly, and sift. When about to be used, mix a portion in a saucer, with a little boiling water, stirring with a knife till of the consistency of a thick paste; the hair is then to be laid in layers or folds, and the composition placed along the roots of each layer, and over the whole hair. When the head is completely covered, a piece of damp brown paper is to be placed over all, and the whole further secured by a handkerchief and nightcap. The next morning, all the powder is to be brushed out, the hair thoroughly washed with soap and water, then dried, and finally oiled and combed.

As all these preparations lose their colour in consequence of the action of the light on the minerals used, and from the growth below of the natural hair, the trouble and inconvenience of having to repeat the same process every eight or ten days is generally a greater annoyance than the original colour of the hair. See SKIN.

HAND.—The human hand is the most perfect, beautiful, and complete member of the entire frame; and if we regard it as an organ composed of many parts, members, and properties, is one of the most wonderful of Nature's creations. As an instrument acting under the intelligence of the mind, nothing is too large or too small for its power and manipulation; no labour, however coarse, no occupation, however complex and minute, is beyond the reach, education, and fulfilment of the hand of man. In every light in which we view this wonderful apparatus, we are equally struck by the simplicity, beauty of arrangement, and extraordinary applicability of every part to some special use or benefit of man. Like every other part of the body, the hand is composed of bones, ligaments, muscles, arteries, veins, nerves, and the cuticle. The hand consists of the wrist, the palm, and fingers, or, in all, of twenty-nine bones. The wrist, or *carpus*, is composed of the two articulating ends of the bones of the forearm—the *radius* and the *ulna*, and of eight small bones, named according to their size and shape: the largest, *magnum*; the boat-shaped, *scaphoid*; half-moon, *semilunar*; the wedge, *cuneiform*; the square and four-sided, *trapezium* and *trapezoid*; the pea-shaped, *pisiform*, and the hook, *unciform*. These are divided into two rows, all firmly bound together, and attached by the upper row to the forearm, and by the lower to the five long bones of the *metacarpus*, or those forming the palm and ball of the thumb. The motions performed by this double joint are those of flexion and extension, a sort of hinge-like motion, with a partial lateral action from side to side. The four fingers, each composed of three bones or joints, making twelve in all, are attached to four chief metacarpal bones, the thumb no longer appertaining to the palm, but consisting of only two joints or bones, thus completing the twenty-nine pieces. The manner in which the wrist joint, and each ball and socket joint of the fingers and thumb, are supplied with capsular ligaments, enclosing the *bursa* proper to each, with the system of ligaments that bind the several bones together, and yet allow them sufficient play and action, is an arrangement quite as wonderful as the bones on which they are laced and bound. On this framework of bones is placed, in a succession of three layers, the muscles and their tendons, by which every motion of the hand, thumb, and fingers is performed; these are the *flexors* and *extensors*, or the openers and shutters of the hand and fingers; the *abductors* and *adductors*, the muscles that move outwards or inwards any part or member, with the *pronators* and *supinators*. See ARM. Between these layers, or by the side of the different muscles, run the arteries, veins, nerves, and lymphatics, which supply the whole with life, sensation, and motion, and carry off the waste; over the whole is carried a strong fibrous texture, to keep all the parts in their place, and form bands, below which some of the tendons play as in a pulley; this *fascia*, as it is called, is followed by adipose tissue, forming a cushion and pad to the palm of the hand; while the nervous *papillæ* at the tip of each finger, by which our finest sense of feeling is conveyed to the mind, with the cuticle covering the whole, completes the anatomy of the hand. See TOUCH. The more intellectual the individual, the higher and more perfect his mental and physical organization, the more perfect in shape and beauty is the hand; while the lower a person falls in the ethnological scale, the more coarse, clumsy, and deeply lined does it become. The chief cause of cracks, sores, and chilblains on the hand, is carelessness or neglect in washing and drying of the hands; using soap too strong of alkali, by which the cuticle is rendered coarse, and more liable to take up the dirt to which they are exposed. The hands, if washed in hot water, the more easily to remove the dirt, should be afterwards washed in cold, with some emollient soap, and great care taken in drying them thoroughly, one hand being used as a polishing-brush to the other after the towel has removed all the moisture.

HANGING, RECOVERY FROM.—Many persons have an idea that in all cases of hanging, the vertebræ of the spine are dislocated, and death results from the pressure of the bone on the spinal marrow. If this were the fact, no case of hanging could be saved, as no means have yet been found to reduce a dislocated neck. As hanging is only a case of suspended animation, the following rules should be inculcated on all persons likely to be thrown in the way of meeting such accidents. In the first place, the body must be instantly cut down, the rope loosened from the neck, the body laid flat, and the head raised; the temporal artery opened, or blood extracted from the arm or the jugular vein; cold water is to be dashed in the face, heated bricks applied to the spine and feet, and, when possible, a stream of electricity carried through the spinal column or the chest, with the means usually employed in cases of Sus pended Animation, which see.

HARDS' FARINACEOUS FOOD.—This well-known preparation for the food of infants has already been favourably noticed in many parts of this work, and will be more directly referred to under INFANTS. Like all such preparations found deserving of patronage, it derives its efficacy from the large quantity of gluten it contains.

According to Dr. Pereira's analysis of this article, he says that Hards' Food is prepared exclusively from the finest Kentish wheat, that grain containing the largest amount of gluten.

HARE-LIP.—A congenital or natural deformity, with which children are sometimes born; the upper lip being cleft or divided, either in the centre or a little to the side of the centre, and so called from the peculiar formation of the upper lip of the hare.

This malformation is sometimes attended with a cleft or fissure along the entire arch of the palate, and in some cases there is a double hare-lip, the cleft existing on each side of the lip, with a double fissure in the palate, or the absence of nearly all the bony part of the roof of the mouth. In all cases there is much inconvenience in talking, and in severe cases, from the absence of one or two teeth, and the cleft in the mouth, articulation is extremely difficult. The TREATMENT, which is extremely simple, consists in cutting the uneven edge of each side of the split lip smooth by a pair of scissors or a knife, till the breach presents the appearance of the letter V reversed (Λ); two or three fine silver pins or needles are then passed through each flap, and a piece of silk thread wound in the form of a figure ∞ from head to point of each pin, till the two raw edges of the flap are brought close together, where they are to be so kept for some days, till a perfect union by the first intention takes place, the patient being kept on a liquid or very soft diet till the union is perfect.

When that is the case, the threads are to be cut, the needles or pins withdrawn, and the part secured for some time longer by strips of the best black adhesive plaster. This operation, to be successful, should be adopted early—as soon, in fact, as the infant's or child's strength can bear it.

HARICOT BEANS.—A species of pulse, very extensively used in France, and as a food one of the most nutritious of all the edible vegetables, and said to hold only a second place in that respect to bread itself, these beans containing [illegible] per cent. of nitrogen in their composition.

HARROWGATE WATER.—The springs of Harrowgate were a century ago the most fashionable spas in England and highly valued for their medicinal properties, particularly in strumous habits of body, in glandular swellings, chronic rheumatism, and obstinate skin diseases. Though Harrowgate possesses both saline and chalybeate springs, it was on account of the former containing an excess of sulphuretted hydrogen, that the waters of Harrowgate became so celebrated.

It is in obstinate cutaneous diseases, both used as a bath and taken internally, that these saline springs are most esteemed. The following prescription will give a very close imitation of the Harrowgate water, and may be used with benefit. Take of—

Epsom salts	1 ounce.
Powdered nitre . . .	2 scruples.
Distilled water . . .	24 ounces.

Dissolve, and add—

Sal polychrist . . .	3 drachms.

Mix: half a tumblerful to be taken every six or eight hours. See POLYCHRIST, SAL.

HARTSHORN.—A volatile alkali, professionally called ammonia, the popular name of hartshorn being given to this substance from its having originally been prepared from the horns and antlers of deer, but now more extensively, and far more cheaply, obtained from bones and tar-water. Hartshorn is either solid or liquid. The first, sometimes called stone hartshorn, volatile salts, or carbonate of ammonia, is the article used by confectioners to cause their pastry to rise, and is what is generally known as smelling salts. The liquid hartshorn is usually called spirits of hartshorn. This article, when strong, and distilled with some essential oils, is known as the spirits of sal volatile. See AMMONIA. Hartshorn and oil, a well-known and favourite popular remedy for sore throats and rheumatic pains, is made by mixing half an ounce of spirits of hartshorn with one ounce of common sweet or olive oil, and shaking both together till a white, soapy liniment results from the union.

HARTSHORN JELLY,—an article occasionally used as an aliment, though possessing small claims to such a distinction,—is prepared by boiling half a pound of the hartshorn shavings in three quarts of water with a gentle heat, straining while hot, then adding sugar and eggs, mixing and setting aside to become a jelly, when it may be either eaten like calf's-foot jelly, or a portion may be made warm, mixed with an equal quantity of milk, and given as a food to children deprived of the breast. In coughs, colds, and consumptions it may answer as a change, but as an aliment for infants it is decidedly most objectionable, unless always given with eggs.

HASTY PUDDING.—A favourite food much used in many parts of England. There are two preparations of this dish; one eaten after the fashion of porridge, the other made as a dainty for the dinner. The first is prepared by mixing a quarter of a pound of flour with a little nutmeg and sugar in some cold milk, like starch, and pouring it into a quart of boiling milk, stirring constantly till it becomes of a proper consistency, when it is to be poured into soup-plates or basins, and, when sufficiently cool, eaten with milk, or sugar if preferred.

The other form is made by boiling the flour and milk for half an hour, and, when cold, adding several eggs and spice, beating the whole together with sufficient sugar, and then baking it in cups or dishes, when it is eaten like custards. Sometimes it is covered with a puff paste, having preserves below the pudding. In this form it is heavy and indigestible.

HEAD.—This portion of the body is generally divided into the *cranium*, or skull, and the face; with all the bones, muscles, organs, and parts contained in each. Confining ourselves more particularly to the former,—the *cranium*, or skull,—we find it to consist of a dome-shaped chamber, made into that form by the bones of the head and face completing the arch. The head, then, is composed, in the first instance, of eight bones—the *frontal*, *occipital*, two *parietal* and two *temporal*, and the *sphenoid* and *ethmoid*; the face, of fourteen, which, with 32 teeth, one bone of the tongue, and eight bones (four on each side) of the internal ear, makes in all sixty-three bones appertaining to the head and face. See CRANIUM.

In the space thus formed by these bones is situated the brain and the beginning of the spinal marrow, with the organs of sight and hearing. Over these bones are expanded the muscles which lift and close the eyelids, corrugate the forehead, open and close the jaws, and shut in the facial cavity known as the mouth (see FACE, TONGUE, and SALIVARY GLANDS), and finally, an integument of a peculiar texture (in which is situated the glands or follicles from which spring the hair), or filamentous covering known as the scalp.

The shape of the head differs greatly, according to the nation or the race of men to which it belongs. Thus, in the higher class of the European it is oblong; with the Turk and Algerine it is round; in the Chinese and Tartar, broad; in the African, flat on the forehead, with protruding jaws and teeth. Little reliance, however, can be placed on the general shape of the head, as most nations adopt some mode of altering its configuration. Whether the manipulation to which the heads of young children are subjected has any sensible effect on the final character of the head has been much disputed, most anatomists believing that the brain peculiar to each variety of the human family, as it is developed, gives the shape, in a great measure, to the head.

As the volume of the brain is generally in direct proportion to the capacity of the mind, we obtain a means of measuring the intellect of the person by the dimensions of his head. The largest heads, as a general rule, are found in the *upper* classes of society, the smallest with the lowest, and a medium size with persons of the middle class of life.

According to the hatter's measurement of the English head it appears that the head of the upper classes of society in this country is eight inches long by seven wide, giving an average diameter of seven and a half inches; that the ordinary English head varies from seven and a half to six and a half inches; and that the average length of head in this country is seven inches. See MAN.

HEADACHE.—This very common form of disease either proceeds from some weakness or exhaustion in the brain, or it arises from some affection of the digestive organs, or else it depends on direct sympathy with them, being symptomatic of one or other form of disease.

There is no indisposition to which the body is liable so universal and well known as the headache; but as many forms of this complaint are merely the symptoms of other diseases, and can only be relieved by the removal of the primary affection, we shall confine our remarks to two conditions of this malady—the Sick, and the Nervous Headache.

SICK, OR BILIOUS HEADACHE.—The *cause* of this distressing complaint is indigestion, or an irregular or sluggish liver, induced by fatigue, excitement, or the partaking of some kind of food too rich or too hard for the digestive powers of the stomach.

Symptoms.—These commence, often very suddenly, with a dull, circumscribed pain on the side of the head, the forehead, or over one or other of the eyes, after a time extending over the whole head, and accompanied either with eructations from the stomach, or sickness, with a rank taste in the throat. Sometimes there is exhausting vomiting, ringing in the ears, flashes before the eyes, while the slightest noise increases the pain and distress in the head to an extraordinary degree.

Treatment.—When headaches of this nature are habitual, and proceed from a torpid liver, the first endeavour should be directed to excite the biliary function to a more healthy action, by taking a 3-grain blue pill every four hours for three times, and a black draught the following morning; or if the latter should be too active, by substituting a seidlitz powder. And where the liver is habitually torpid, a Pulvermacher's belt should be worn over the organ for a few hours every day, at the same time taking a 4-grain blue pill at bedtime once a week, and a black draught, or seidlitz powder, the *following morning*, till the liver has been excited into a healthier perfo
function.

When the sick headache i
quence of some indigestible
emetic of 15 grains of ipeca
solved in some warm wat
vomiting encouraged by drau
water, should be taken before
extended over the whole h
sionally, these headaches pro
excess of alkali in the gastri
such cases, a few spoonfuls o
the juice of a squeezed lemo
little water, or 10 grains o
dissolved in a wineglass of
afford instant relief. In all o
or where the liver is not an ex
a dessertspoonful of Gregory
a little water, to which 20
volatile are added, will be fo
relief, and may be repeated
hours for a few times; i
carrying off the consequenc
pill, and seidlitz powder t
day.

When there is much flatu
ing the excess of acidity in
one of the following powd
taken every three hours, till
the stomach is restored, and
the head abated. Take of—

Dried carbonate of soda . . . . . .
Ginger, powdered . . 1
Colombo, powdered . 1
Magnesia . . . . .

Mix, and divide into six pow
powder should be dissolved i
of water, and 10 drops of sal v
before drinking. See INDIG

NERVOUS HEADACHE.—
questionable whether nervo
ever occurs as an indepen
As we, however, often find
without any positive traits
tional disturbance, it is mor
to class it as if it were a sp
beginning and ending with it
toms.

The *causes* of nervous
cephalalgia neuralgia, are ei
to cold and wet, marsh mia
previous specific constitutio
ance. The seat of this dise
in the integuments of the sk
of the orbit and face, or in
of the bones themselves.

Symptoms.—The pain com
of periodical rotation, and, li
be calculated upon to the
return. The pain is someti

at others extends over the
hile at other times it only
lf of the head, or head and
being more excessive over
rehead; the pulse is usually
nall, the bowels are often
nd the tongue marked with
n the middle, and pale red
tolerance to light and sound
excessive; the eyes are often
times red, while the cuticle
nsitive that even the eleva-
eyebrow will increase the

ent must commence by at-
general health, by a course
ients, such as the compound
colocynth pills, regulating
diet according to the con-
tamina and the digestive
stomach, and by the em-
quinine in either of the an-
; the first, however, is the
us, and should be adopted,
ike to the bitter forms an
bjection.

mixture.—Take of—
spings . . . 1 drachm.
. . . . . . 2 drachms.
ater . . . 12 ounces.
hours, strain, and add—
. . . . . . ½ drachm.
ulphuric acid 1½ drachms.
quinine in the acid and a
y of the infusion; then mix
nd give two tablespoonfuls
ours, so as to insure four
For general directions, see

ervous headaches to which
licate constitutions are liable,
ccur at irregular intervals,
quently obtained by using
lotions for the head, and an
ic draught, especially when
or preceded by an aperient
ened room, quietude, and an
lietary are conditions to be
n such cases, the following
mixture may be used with

Take of—
miac . . . 2 drachms.
water . . . 1 pint.
l add—
. . . . . . 4 ounces.
c ether . . . 2 drachms.
s wetted with this lotion
applied to the head and
d the moisture allowed to

Antispasmodic Mixture.—Take of—

Tincture of valerian .	3 drachms.
Tincture of castor (compound). . . .	3 drachms.
Pennyroyal water . .	5 ounces.
Tincture of assafœtida	10 drops.
Spirits of sulphuric ether	2 drachms.

Mix: two tablespoonfuls to be given every three or four hours.

The headache which proceeds from a fulness of blood in the head, if not the cause of apoplexy, must be treated by the application of leeches, the cupping glasses, a blister behind the ears, or at the nape of the neck, while an action on the bowels should be effected by a compound colocynth pill and a black draught.

Cases occasionally occur where the nervous headache is the consequence of some irritation in the stomach, when a little soda, magnesia, and rhubarb, with a few drops of sal volatile, will effect a perfect and immediate relief. The headaches connected with rheumatism, with organic diseases in the skull, and those resulting from derangement of the digestive organs, will be found under their respective heads, and the latter under Indigestion, which see.

HEAD, INJURIES OF.—The accidents which properly come under this denomination are cuts, punctures, and contusions of the scalp, with fractures of the bones of the skull, effusions of blood, suppuration, and erysipelas of the integument.

Treatment.—In all injuries of the head, the part directly over the wound or accident should be shaved, and if a clean or jagged cut, the edges brought smoothly together, and secured by straps of adhesive plaster,—as a general rule, *stitches* in the scalp should be avoided, as liable to excite erysipelas,—a piece of oilskin laid over the part, and the whole secured with a loose bandage.

When the scalp has been punctured with a fork or pointed instrument, it is sometimes necessary to lay open the wound, so as to insure its proper healing, and afterwards dress it with warm fomentations or bran poultices. When the scalp has been injured by severe bruises, warm water dressings will in general be found the best application, unless there be considerable heat and inflammation, when a lotion of sugar of lead, in the proportion of 2 drachms of the sugar of lead to a pint of water and 2 ounces of vinegar, is to be applied, slightly warmed, on pledgets of lint or linen. When blood is effused beneath the scalp, or, from the force of the blow or accident, suppuration takes place in the same situation, an opening must be made to allow the escape of the fluid collected beneath the scalp and the part poulticed, to insure the discharge of all the blood or pus from the part.

In a case of effusion of blood below the scalp, it is not always necessary to open the swelling immediately, especially if the quantity be small, as the lead lotion will generally promote absorption of the blood thrown out.

Extravasation of blood on the brain, and fracture of the bones of the skull, are the most dangerous of all the accidents to which the head is liable. Owing to the number of pieces of bone composing the skull, a simple fracture seldom extends far, as it is usually confined to one bone; in such cases, the fracture is a mere crack, as in a pane of glass, and only requires perfect quietude, precautionary measures in keeping down inflammation, and cooling applications to the part, to effect a cure.

When, however, a portion of bone is pressed down on the brain, producing a train of symptoms analogous to those of "compression" from blood or pus effused on the brain, the treatment in both cases is the same, and consists in shaving the head over the part, making a triangular incision through the scalp and reflecting the flesh backwards, and then, by means of an instrument called a lever, elevating the bone into its proper place; or else, by the application of a trephine, cutting a circular piece of bone from the unbroken part, and allowing the escape of the fluid collected, or by that means getting a purchase for the lever to raise the depressed bone. See TREPANNING.

HEALING PROCESS.—The means by which nature repairs an injury in the human body are of the most simple yet efficacious character; and if the vitality of the part has not been destroyed by the accident, and there is sufficient health and strength in the patient, all the surgeon has to do is to cleanse the part of all irritating or foreign substances, such as grains of gunpowder, sand, stones, splinters of wood, &c., lay the parts smoothly together, and, enjoining perfect rest, leave nature to effect the cure. This, in the skin and flesh of the body, is effected by the vessels from the cut or *lacerated* part throwing out a thin fluid called coagulable lymph, which, as it hardens, has the effect of gluing the parts together. Into this lymph, after a short time, minute arteries shoot, and begin laying down new muscular fibre, till either the breach is filled up, or the two severed sides intimately united.

The simplest form of this process is when a clean cut is made through the skin or flesh by a sharp knife, and the two sides, being brought exactly together and so retained, heal with surprising rapidity, leaving no trace of the injury inflicted. This process is called by surgeons UNION OR HEALING BY THE FIRST INTENTION, and which, being the most satisfactory and rapid in its result, is always eagerly sought for in practice.

The other form of the healing process may be illustrated by a wound inflicted by some weapon that actually cuts *a piece out of the flesh* and cuticle, leaving a cavity of more or less extent to be closed up. As the edges of such a wound cannot be brought together for the intervening gap, there is no hope of effecting union by the *first intention;* reparation must consequently be effected by the production of new matter, and the filling up of the cavity from the bottom by fresh granulations, till the excavation, having been filled up to the level of the adjacent parts begins to film over from the edges, and the whole is covered with new and healthy skin, leaving, however, a scar or *cicatrix;* this process is called UNION BY THE SECOND INTENTION.

The repairing power of nature is so active, that if a portion of flesh is cut out, a nose or finger severed from the body, and either fitted into its place, and securely retained there for some time, it will become once more as firmly united as if it had never been parted from the body. This is no theory, but a fact, and one that should never be lost sight of by those who may be called upon to act as a friend in need, or on emergency in case of accident. See WOUNDS.

HEALTH, PRESERVATION OF.—It is an old but a very just saying, that no one knows the value of health till they begin to lose it; and it may be affirmed with equal truth, that the moment we become conscious that we have an eye, a stomach, or a heart, or *feel* any part of the silent but wondrous mechanism of which we are composed, disease or injury has invaded that organ or function. Health, then, is the insensible performance of all the operations of the body.

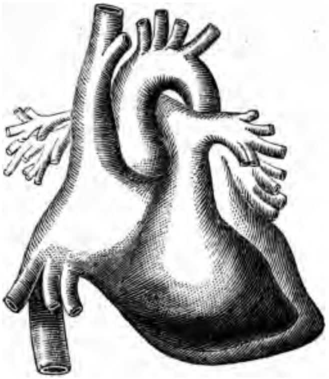
ight be said in this place on the
tion of that inestimable boon,
but as most persons have an
f their own on such a subject,
e sufficient to specify the most
t rules to be observed. As far as
agents are concerned, those abso-
cessary to the preservation of
e,—
constant and abundant supply
ir.
sufficiency of warm and appro-
thing; the dress having reference
ason.
n ample supply of wholesome and
s food.
due amount of daily exercise.
requent ablutions of the entire
l general cleanliness of the skin.
n adequate proportion of relaxa-
amusement.
arly hours, and regularity in the

astly, constant occupation both
ind and the body.
lition to these rules, all sudden
ns of temperature should be
the sleeping-room should be
d well ventilated; exposure to
d fogs avoided; the mind kept
nd active; the food well masti-
l slowly eaten, and the beverage
imple and unstimulating as pos-
y the adoption of such rules, and
ttention to the first symptoms of
eneral indisposition, a person may
preserve the blessings of health
ngest possible period.
RING.—One of the external
he function of the ear by which
nade cognizant of the different
which reach that organ, or the
y which we perceive and translate
The air, set in motion by the voice
ker, the fall of a hammer, or by
cause, comes in waves or undula-
he ear, where they are collected by
lage of the ear, and the vibrations
ed to the middle ear, causing the
nes to strike the tympanum, from
hey are taken up and conveyed
r vibrations to the internal ap-
of the inner ear; where the
undulating through the semicir-
nals, vestibule, and cochlea, are
ated where every filament of the
nerve, or nerve of hearing, is ex-
and receives the impression of the
sound carried by the undulating
transmitted by the nerves to the
m, or brain, where the educated faculty gives a meaning or translation to the sound heard. Anatomy makes us familiar with the machinery by which this function is performed, but *how* we are enabled only to hear one sound by two ears, and can with such velocity interpret sounds into words, and words into ideas, is but a part in the chain of that inexplicable mystery which shrouds so many of the intellectual attributes of man.

HEART, THE.—Anatomists describe the heart as a muscular bag, divided into four unequal cavities, and consisting of two parts,—a right and a left heart.

The heart is the reservoir of the blood, and the great central organ of the circulation; in shape it is somewhat pyramidal, situated on the left side of the thorax, the base upwards and backwards towards the spine, and the apex lying obliquely downwards and forwards, behind the fifth and sixth ribs, attached above by its great vessels to the upper part of the chest, and resting at its lower extremity, in part upon the *diaphragm* or midriff, the whole organ enclosed in a sac or membrane, called the *pericardium*, or covering of the heart. In this bag the heart has just room to allow of its motions, without friction or confinement. The heart is divided into two sides,—the right and the left; the one to receive the *venous* blood, and the other the *arterial;* or, the first for the circulation through the lungs, and the latter through the body. Though forming one muscle, there are two distinct hearts, each side being divided from the other by a *septum*, or wall. In fœtal life, however, before the birth of the child, when the lungs are in abeyance, and there is no circulation through them, an opening exists in the infant's heart, from the upper chamber of the right to that of the left side. This opening or valve, called *foramen ovale*, or oval-shaped aperture, the instant the child breathes, shuts like a door, and immediately becomes permanently closed, and in time obliterated, the blood at that moment taking a different course, as we shall proceed to explain.

Right Side of the Heart.—This, or the venous portion of the organ, is divided into an upper and lower chamber or cavity, called *auricle* and *ventricle*, an opening guarded by a valve leading from the upper cavity or auricle into the lower or ventricle. All the refuse blood from the lower parts of the body is brought to the right auricle by a vein called *vena cava ascendens*, and all that from the upper part by the *vena cava descendens*. As soon as the right auricle is full it contracts, somewhat as a man may clench his hand; this action forces open the valve in the side of the auricle, when all its blood instantly rushes into the right ventricle; at the same moment, to prevent the blood from being forced back into the great veins that brought it to the auricle, a set of valves fall over their mouths so as to effectually guard against regurgitation. The auricle, having contracted to expel its contents, instantly relaxes and opens, the valves rise from the veins, and the blood again pours in till it is filled: this contraction and expansion is called the *systole* and *diastole*. The moment the auricle expands, the ventricle in its turn contracts, and forces the blood into a large vessel called the pulmonary artery—a misnomer,—which instantly divides into two branches, right and left, one to each lung, in which, being minutely ramified, and their dark blood freely exposed to the air in the moment of inspiration, it becomes charged with oxygen, gives off its carbon in the shape of carbonic acid, and becomes the bright scarlet, arterial blood, the builder up and supporter of life. This arterial blood is collected by innumerable vessels, which eventually terminate in four tubes, two from each lung, called pulmonary veins—a misnomer,—and carried to the—



THE HEART.—RIGHT SIDE.

Left Side of the Heart.—The arterial portion of the organ consists, like the right side, of two cavities, an auricle and a ventricle. Into the upper part of the left auricle the new-formed blood from the lungs is poured, by the four mouths of the pulmonary veins, till the cavity is full, when it contracts in the same manner as the right auricle, forcing its contents through a valve into the left ventricle, which, on the expansion of the auricle, contracts, and forces the blood into the aorta, the largest vessel in the body, and from which every part of the system is directly or indirectly supplied with arterial blood; the whole being brought back, when it has fulfilled its duty, to the starting-point, the right auricle, by the two *venæ cavæ*, thus completing the double circle, first from the heart to the lungs and back, or from right ventricle to left auricle; and secondly from the heart through the system and back, or from the left ventricle to the right auricle. The same provision of valves at the mouths and commencement of the vessels in the left side of the heart prevents the return of blood as those in the right.

Each of the four cavities of the heart contains between from 2 to 3 ounces of blood; the whole quantity of blood in an adult man varies from 25 to 30 pints or pounds. The heart contracts 4,000 times in an hour; there consequently passes through the heart, every hour, 8,000 ounces, or 700 pounds of blood; in other words, every drop of blood in the system passes through the heart twenty-eight times in one hour, or once every two minutes.

HEART, DISEASES OF.—Physicians describe three sets or kinds of diseases affecting the heart,—*Sympathetic*, *Inflammatory*, and *Organic*. Of these, the only set that it is necessary to refer to in this work is the first,—the sympathetic, or those arising from participation or sympathy with some other disease or affection, or what may be called functional disturbances of the heart. All the others are of such consequence, and so imperatively call for a physician's superintendence, that it would be uncalled-for to enter on them here further than to signify their names.

Of the Inflammatory, the principal diseases are those affecting the heart itself (*carditis*), and the membranous bag in which it is contained (pericardium), and called *pericarditis ;* in both, the inflammation may be acute and chronic. Of the Organic diseases, or those affecting the structure and integrity of the organ itself, the most important are *induration*, or hardening; *softening; atrophy*, or wasting; *hypertrophy*, an enlargement of the muscular substance of the heart; *dila-*

ation, or enlargement of one or other or ll of the cavities of the heart, either alone r combined with hypertrophy or atrophy; *orbid growths*, or excrescences springng from the lining membrane of the eart; *morbid depositions*, and diseases f the valves and orifices of the heart, ading to cartilaginous depositions, or bsolute ossification of those parts. For he Sympathetic affections of the heart, e PALPITATION.

HEARTBURN.—This affection of the tomach, erroneously attributed to the eart, is a mere derangement of the igestive organs—an excess of acidity, in ct, in the stomach, either proceeding om too acid a state of the gastric juice, om some crude and indigestible subtance in the stomach, from a piece of ristle, fragment of bone, or some irriating body, which, as we have shown nder Digestion, attempts to pass the yloric orifice of the stomach, and, after ain appeals, is turned back till more ompletely digested, causing heat, pain, nd inconvenience; or it is the result of orms in the bowels, irritating the whole limentary tube. The symptoms of heart-urn are too generally known to need escription here; and it will suffice if we mention the best remedies for the different auses of the complaint.

For the heartburn to which *pregnant women* are so subject from the time of quickening to the end of the eighth month, the best remedy is lump magnesia, of which the patient may eat as much as she pleases; or a teaspoonful of prepared chalk, with 5 grains of ginger, twice a day, in milk or cold water; or she may eat a few teaspoonfuls of whole rice, which will often afford more relief than any other remedy.

For heartburn the result of *acidity from eating pickles*, acid fruits, or acidity of the gastric juice, 20 grains of carbonate of soda or 15 of carbonate of potass, with 1 grain of ginger, and 1 grain of rhubarb, taken in a wineglassful of water three times a day, or a teaspoonful of chalk or magnesia in a little peppermint water, will, in general, be found effectual in correcting the cause of annoyance.

When heartburn proceeds *from indigestible matter* in the stomach, either an emetic of 15 grains of powdered ipecacuanha, or a compound colocynth pill, followed in three hours by half an ounce of Epsom salts in a tumbler of water, is to be taken. Either plan can be adopted; the only advantage in the emetic is that its operation is more rapid, though more exhausting than the aperient plan.

For the heartburn resulting *from worms*, or irritation in the bowels, the reader must consult the articles Worms, and Tape-worm, which see.

For those affected with heartburn *after meals, especially dinner*, accompanied with sour eructations, a pill composed of 3 grains of dried carbonate of soda, 1 of calumba, and 1 of ginger, should be taken an hour before dinner, and 20 grains of carbonate of ammonia, in a wineglassful of infusion of camomiles, half an hour afterwards, if necessary.

HEAT.—Temperature, in all its different degrees. The effect of heat on the human body, and its influence as a physiological and physical agent, is a subject of the utmost importance to man. The inquiry into the effects of solar heat on the human body in tropical latitudes, and what influence high and low temperatures exercise on the mental and physical development of the human race, is a subject of deep interest to all inquiring minds, but unnecessary to broach in these pages. Man has the peculiar gift of accommodating himself to every degree of temperature, and, under certain conditions, can live as well under a vertical sun, or on the equator, as at the north or south pole. The sheep and the dog are the only quadrupeds who approach to man in this faculty, while the crow, among birds, is found to possess nearly the same property.

Heat, when the temperature is high, acts as a disinfectant, and clothes, however infected with typhoid miasma, or the virus of small-pox, can be as perfectly purified and rendered safe by exposure for a short time to a dry heat of 200° as if soaked in chloride of lime, repeatedly washed, bleached, and ventilated.

The average heat of the human body is 97° or 98° Fahrenheit, though in some cases of fever it rises to 109°, and in particular conditions to 115°.

The medical effects of heat are those of a stimulant, sedative, emollient, and relaxative of muscular tension. To effect most of these results, the heat has to be applied to the body in the form of fomentations and poultices, and is sometimes generated by friction.

HEAT, ANIMAL.—The property of all animals, by which they preserve a certain temperature, which is quite independent of that of the surrounding medium, and appears to be in proportion to the irritability and sensibility possessed by each; and the more free and independent the animal, the more uniform its temperature. On that account, the temperature of man is the most equable, and may be invariably taken at 97°, whether in the frozen regions or under the equator. If any sensible change is exercised on man by temperature, it is that intense heat *lowers* his standard, and excessive cold *raises* it. Men, women, and children have entered ovens heated to a state only short of redness without altering their own temperature, and some thirty years ago, Francisco Martinez, a Spaniard, remained in an oven at 279° Fahrenheit till a kettle of cold water boiled, and a piece of meat for his dinner was cooked, a free perspiration carrying off the excessive heat from his body, and keeping it at its natural standard. Animal heat, as we have already more than once remarked, is produced by the function of respiration. At every inspiration of fresh air taken, the oxygen is drawn from the air by its affinity for the carbon in the impure blood brought to the lungs from the right ventricle of the heart. The carbon, by that absorption of oxygen, is converted into carbonic acid gas, which is given off by the lungs at every expiration; while, by the chemical union that takes place, the latent caloric is made sensible, and the temperature of the blood left for circulation augmented to the standard of 97°. See Blood, Venous and Arterial; Heart, Respiration, Food, &c.

HECTIC FEVER.—This is a disease that always depends upon some other malady for its origin, and often assumes the appearance of a fever succeeding a fever, and is usually the termination of a long affection. When typhus or scarlet fever has died out or been subdued, leaving a state of absolute prostration, this sympathetic fever rises on its ruins, and by its punctual returns and remissions, often deprives the patient of his last hope by exhausting him of his remaining strength.

Hectic fever may follow any long and debilitating disease, or succeed upon the exhaustion of an injury or an operation.

The symptoms of hectic fever generally begin with shivering, though not always, as occasionally they commence with flushes and perspiration; hectic comes on in the evening, inducing a dry, hot skin, flushed countenance, brightness of the eyes, thirst, and restlessness, profuse perspiration; the pulse becomes quick and small, or sharp, and the water is high in colour and scanty in quantity. The whole of these symptoms pass off with the morning, when the remission occurs, and the exhausted patient drops into an uneasy slumber.

As the treatment of hectic fever can hardly be separated from the disease, accident, or operation which gave rise to it, it is impossible to say more than, as a general rule, the strength is to be supported by tonics, the restlessness and anxiety soothed by sedatives, and the exhausting sweats checked by bitters and mineral acids. The first object must be met by giving quinine in aromatic confection, with wine; the second, by nightly doses of morphia and henbane; and the last, by an infusion of hops, quassia, or gentian, with sulphuric or nitric acid, and by the decoction of sarsaparilla.

HELIX.—The name given by anatomists to the external border or circle of the cartilage of the ear.

HELLEBORE.—The name of a genus of plants, native of the Pyrenees and Apennines, and belonging to the Natural order *Ranunculaceæ*.

There are three varieties of this plant, called the *black*, the *white*, and the *stinking* hellebore. The ancients were strongly attached to this drug, and used it extensively in all maniacal cases; indeed, they regarded it as a specific in madness generally.

THE HELLEBORE.

It exercises three effects on the body,—hat of a powerful purgative, an emetic, nd an *errhine*, or snuff, for cephalic ffections; but as it is a violent poison, nd uncertain in its action, hellebore is ery properly excluded from the modern ractice of physic, as the same effects can e obtained safer and better from other rticles.

The chief use to which hellebore is now ut, and that only by some medical men, as an emmenagogue in uterine retenon; but as, from its strong action on the owels, it is liable to produce abortion, it ould never be given where there is any ar of such a result. The white hellebore sometimes used for skin diseases, the owder of the root being mixed with ointent. See VERATRUM.

HEMIPLEGIA.—A palsy affecting ne half of the body, usually the left side; disease in which the entire of one half f the body, from the head to the foot, is endered powerless or insensible. See ARALYSIS.

HEMLOCK.—A rank, nauseous, and oisonous plant; the *Conium maculatum*, r the spotted hemlock, belonging to the atural order *Umbelliferæ*. There are wo varieties of this plant,—the common nd the water hemlock, or the *Cicuta*: the rst grows on a spotted stalk, rising to the eight of five or six feet, with hollow oints and large green, shining leaves, aving a strong, rank, and offensive odour. The *Cicuta*, or water hemlock, grows on the argin of ponds and lakes, and in look nd smell strongly resembles parsley, for hich it has been frequently mistaken, nd with very serious consequences.

PREPARATIONS AND MEDICAL USES.—he preparations of the hemlock in use re the powder of the dried leaves, *pulvis onii*; the tincture, *tinctura conii*; the xtract of the leaves, *extractum conii*; and ometimes a plaster and ointment. The edical effects of the hemlock are those of sedative and antispasmodic, for which it as been largely employed in cancer; but s effects as a remedy are very questionable, while from its liability to accumulate in the system, it becomes at best a azardous drug to use. As a sedative or nodyne, the dose of the powder is about grains twice a day, or 1 grain gradually ncreased; the dose of the tincture is from 5 to 20 drops; and of the extract, 5 grains. When taken in mistake for parsley or elery, an emetic of sulphate of zinc should e given immediately, and a quantity of inegar afterwards as an antidote. For the treatment of a case of overdose of hemlock, see POISONS.

HEMP, INDIAN.—A tropical plant, almost universally used in the East on account of the intoxicating properties extracted from it, and botanically known as *Cannabis sativa*. A resinous secretion obtained from this plant, called *churrus*, is the only preparation used medicinally, as a narcotic and antispasmodic. This plant is chiefly remarkable from yielding the celebrated Arabian soporific known as HASCHISCH. The Turks, the Hottentots, and the Hindoos, all extract from this species of hemp a strong intoxicating liquid. Though very seldom used in this country, the *Cannabis* is much esteemed in the East in all neuralgic affections, particularly in tetanus and hydrophobia, for which the resinous extract, *churrus*, has been favourably prescribed, in doses of from 2 to 8 grains; while a tincture made from the plant is given in quantities varying from half a drachm to 1 drachm. The seeds of the European hemp are said to possess properties somewhat analogous, but much weaker.

HENBANE (*Hyoscyamus niger*).—An anodyne and narcotic plant common to most parts of Europe, and belonging to the Natural order *Solanaceæ*. The plant grows from a stem, with broad, hairy, and serrated leaves, and flowers in July and August, with dull yellowish blossoms.

PREPARATIONS AND USES.—The form in which the henbane is usually prescribed is that of the powder of the dried leaves; the tincture, *tinctura hyoscyami;* and the extract of the plant, *extractum hyoscyami.* Its action on the system is that of an anodyne and sedative, and, in large doses. narcotic.

The powder is a most unsafe form to prescribe, and should never be relied on: the dose of the tincture is from half a drachm to 2 drachms; and of the extract, 10 grains. The latter is, of all its preparations, the best and the safest.

HEREDITARY DISEASES.—A term applied to those diseases which experience has shown to be handed down from one generation to another in the same family; thus, we frequently find that insanity, gout, and scrofula, epilepsy and some other diseases, can often be traced back for several generations, while syphilis and small-pox are perpetually being reproduced in the new-born infant.

HERMETICALLY SEALED. — A method of permanently closing a vase or bottle, so that the contents shall neither be tampered with nor can evaporate, in consequence of the total exclusion of air. The method by which this process is effected is by firmly fitting the screw, if in a metallic vessel, or the stopper if in a glass one, and then, by means of strong heat or a blow-pipe, fusing the surrounding metal or glass till the whole of the top is incorporated. A large water-tap was found at Herculaneum hermetically sealed by the heat of the lava; the fluid in which may still be heard when the tap is shaken. The word is derived from Hermes, or Mercury, the Egyptian god of arts and sciences.

HERNET'S DENTIFRICE.—A tooth-powder, made by mixing 8 ounces of powdered cuttle-fish, 1 ounce of powdered orris root, and 1 ounce of cream of tartar.

HERNIA. See RUPTURE.

HERPES.—An eruptive disease of the cuticle. See SKIN, DISEASES OF.

HICCOUGH, commonly called HICCUP.—A spasmodic affection of the diaphragm, in which the muscles of respiration and of the larynx are more or less involved.

Hiccough may occur from eating too hastily after a lengthened fast, from drinking cold water, or from many causes affecting the stomach. As a symptom towards the end of fever, or in gangrene, it is always regarded as the near harbinger of death.

The TREATMENT for hiccough, when a sudden ejaculation or a diversion of the patient's mind fails to check it, is to give 20 drops of sal volatile and 15 drops of ether in a wineglass of camphor water, or, in severe cases, 30 drops of laudanum.

HIERA PICRA, vulgarly called HICKERY PICKERY.—The holy bitter. A very excellent old-fashioned tonic bitter, made by mixing one part of powdered aloes with two parts of canella alba. Dose, half a drachm.

HIP JOINT, or the *Ischium*.—One of the most important articulations in the body, and the most complete example of the ball and socket joint. The hip joint is made up of two bones,—the *acetabulum*, or cup-like cavity in the os innominatum, or three bones forming one half of the *pelvis;* and the head of the *femur*, or thigh bone, the same provision being made here, by capsular, conical, transverse, and lateral ligaments, to secure the bone in its socket, and yet afford unlimited play to the limb; while, to guard it from blows and the force of accidents, the part is padded with a number of short, fleshy muscles, in addition to which a quantity of adipose tissue beneath the cuticle still further protects the part.

HIP JOINT, DISEASE OF.—Fractures and dislocations are the most frequent misfortunes to which the articulation of the hip is subject; these, however, are accidents. The disease to which it is more particularly liable is an inflammatory action, which degenerates into *caries* —rottenness, decay, or death of the part, —causing excessive pain, a drawing up of the limb, suppuration, ulceration, and a burrowing of matter under the muscles and fascia of the part. Professor Syme, of Edinburgh, was the first who succeeded in curing this disease without amputating the limb at the hip joint. His system consisted in applying the actual cautery, by means of irons heated to a white incandescence rubbed freely over the buttock and affected joint, so as to destroy, by sloughing, the integuments and tissues of the part, and, by thus producing an immense suppurating issue, excite, by the counter-irritation of the sore, a healthy action in the joint. This practice has been eminently successful, and is infinitely superior to either "excision," cutting out the diseased bone, or amputation. *Morbus coxarius*, the name of this disease, is a local form of scrofula.

HIPPOCAMPI, MAJOR AND MINOR.—The large and small sea-horse. The name of two processes in the ventricles of the brain, so called from their fanciful resemblance to the hippocampi.

HIPPOCRAS.—An ancient spiced beverage, held in great esteem by the monks in the Middle Ages as a warm and grateful cordial and stimulant in cases of cold, and also as a beverage in winter nights, and for the aged and relaxed. The spiced hippocras, as it was called, was made differently by different nations and persons; in general, however, it consisted of cinnamon, cloves, nutmegs, mace, ginger, grains of paradise, and canella bark, bruised and macerated for seven days in Canary wine (Madeira), and then sweetened either with honey or sugar, strained, and taken warm.

The YPOCRAS for lords and abbots was somewhat more potent, and was prepared with aqua vitæ, or brandy, pepper, ginger, cloves, grains of paradise, ambergris, and musk.

HIPS.—The well-known fruit of the dog-rose (*Rosa canina*); only used in medicine to manufacture a confection, *nfectio rosæ*. See ROSE.

HIRUDO.—The Latin for a Leech, which see.

HIVES.—A north-country name for Chicken or Glass Pox, which see.

HOCK.—One of the most esteemed of German wines. See WINES.

HOFFMANN'S ANODYNE. — An thereal preparation of the Pharmacopœia, ommonly called the compound spirits of ulphuric ether. The Hoffmann's anodyne, as it is somewhat improperly termed, , in its action, an antispasmodic, any dative property it exercises being the esult of its action on the spasm.

HOLLANDS.—A fine, light, ethereal pirit; Dutch gin; a rectified spirit, btained from malted grain and juniper, chiedam. See SPIRITS.

HOME SICKNESS.—A mental deression, which suddenly seizes the natives of a distant country with an irreistible longing to return to their native and. So powerful is this feeling, that en have deserted their colours, broken hrough all ties of obligation and honour, n their desire to revisit their youthful aunts. The Swiss are so devotedly atached to their native mountains, that it as found necessary to forbid the playing f the national air of "Rans des Vaches" efore the Swiss troops of France and Naples, the men deserting in companies, r committing suicide if unable to revisit heir beloved fatherland. Physicians have given the name of *Nostalgia* to this melancholy longing.

HOMŒOPATHY. — The science or study of similarity. A system of medical practicè, introduced by Dr. Hahnemann, a German physician, about the year 1810. Though persecuted in his own country, and driven into France by the intolerance of the profession, Hahnemann's new principles rapidly gained ground, both with the public and among medical men, till its supporters are now numbered by hundreds of thousands, and its professors embrace some of the most able and learned physicians of the age. The narrow-minded prejudice displayed by the apothecaries of Saxony, when, from pecuniary motives, they drove Hahnemann from his native country fifty years ago, has to some extent been revived by the College of Physicians in this country at the present day against the followers of his theory, and everything been done, both by the profession and its literary organs, to throw discredit and ridicule on homœopathy as a science, and to class its practitioners, however distinguished their reputation, as empirics and quacks. Though by no means subscribing to all the principles on which the science of homœopathy is founded, or by any means identifying ourselves with its practice, there are so many admirable points connected with it—so many of its facts are based on undeniable truths, and so many men of high standing have become associated with it, that our respect is equally commanded by its professors and by those who implicitly believe in its practice. On this account, and from respect to every system of medicine based on just and conscientious principles, we give a place to homœopathy in this work, with a brief and impartial account of its most important features.

The principle that "*like cures like*" (*similia similibus curantur*), on which Hahnemann based his doctrine, is as old as Hippocrates, and, though proved to be correct in some cases, was early discovered to be valueless as a general rule. The practice, still adopted by some persons, of holding a burnt or scalded part before a strong fire, in the hope of thereby drawing out the heat and pain, is a remnant of this practice in exceptional cases.

Homœopathy professes to cure diseases by the employment of such medicines as would, if given to a healthy person, produce the symptoms of a disease similar to the one to be treated. The three points on which the fabric of homœopathy may be said to rest are—first, *that like cures like;* second, that the curative power of drugs *is increased in proportion to their minute subdivision;* and third, as a consequence of the latter, *infinitesimal doses of medicine are the proper treatment of all diseases.*

The great distinction between the allopathic and homœopathic practitioner, or between him who gives large doses and infinitesimal quantities of medicines, consists in the allopath, or ordinary medical man, taking his drugs as nature produces them, and giving them in bulk, in powder, infusion, tincture, or extract; with the homœopath, however, it is very different; each drug or medicine has to undergo a long and elaborate process of preparation before it can be employed. Thus, a few grains of an article, having been triturated (rubbed down) in a Wedgwood mortar, so as to insure the minute division of every part or atom, is then mixed with ten or twenty times its weight of sugar, or some inert substance, again triturated for a considerable time, till the lesser is intimately incorporated with the larger material, when a tenth or a twentieth part of this mixture is once more subjected to the same process with an excess of inert matter, till finally there remains but a thousandth part of a grain of the original substance in any given quantity, or till what is known as an infinitesimal portion of the active principle exists in every dose or globule administered.

The homœopathist starts with the assumption that all the medicines he prescribes are either *operative* or *inoperative;* that when they operate their action is for good, and always curative in their results; that when inoperative, though they exercise no influence on the system, they are yet perfectly harmless; and when they *do not* exercise any effect, it arises from a mistaken hypothesis, and not from a want of energy in the medicines themselves. The homœopathist, again, does not trouble himself about after consequences, or the possible results of a disease, or whether it is liable to eventuate in inflammation or effusion. Content with the symptoms before him, and a careful diagnosis, he applies his remedies with such judgment and accuracy, selecting the medicines best suited for the object aimed at, that even should they not effect the result desired, he is certain they will not aggravate any condition of the system, or complicate the case by a wrong or excessive action. Thus, if any after consequence takes place, he treats it with the same confidence and fitness of remedy; whereas the allopathist, as the other alleges, frequently, by his violent drugs and excessive doses, makes the after consequences, when they occur, more severe and dangerous in their effect, and, as a consequence, more difficult to subdue.

There can be no doubt that the large doses of active medicines constantly prescribed by medical men generally, and the great quantity of physic which people in this country are in the habit of taking, is a direct injury to the constitution; and it is equally undeniable that the active manner in which it is the fashion to treat the first stages of some diseases, by overtaxing some organs, or unduly exhausting or stimulating the system, often exaggerates the disease, and renders the final cure more difficult and protracted; but, unfortunately, the transition from full to infinitesimal doses is so abrupt, and the contrast so startling, that those who are ready to admit the injury inflicted by the one system cannot reconcile the inappreciable quantity of the remedies in the other.

There can be no question that, in respect of their medicines and mode of exhibition, general opinion is decidedly in favour of homœopathy. In this science the Pharmacopœia, instead of being encumbered with hundreds of drugs, with a multiplicity of compounds and preparations, consists of a modest list of some thirty or forty articles, while the pleasant globule or tasteless liquid in which they are given is a positive boon, when compared with our nauseous draughts and objectionable pills. There are many points in the homœopathic system which the medical profession might imitate with great advantage to the public, particularly in that department which relates to the hygiene, or the general preservation of health, as far as that state of the body is influenced by such agents as light and darkness, heat and cold, climate, exercise, clothing, bathing, and diet. On this latter head the homœopathist is especially particular, and, indeed, a strict attention to diet and regimen forms a most important part of the whole treatment, and in his strict attention to the agency of diet he far surpasses the allopathist. They are also much more particular in their inquiries into the history of symptoms than the general physician, and are not content with studying the condition of the patient, but endeavour to obtain, by indefatigable inquiries, an accurate account of the patient's parents and relatives. These facts are elaborately classified into the patient's temperament, constitution, disposition, mode of living, and general habits. By means of this complete and searching system of inquiry the homœopathist is put in possession of a vast number of collateral facts, which, when judiciously arranged, afford most reliable and material aid, both in the diagnosis and treatment of the disease.

For a useful and instructive work on the principles and practice of homœopathy, see "A Handy Book of Domestic Homœopathic Practice," by George Edward Allshorn, M.D., published by Houlston and Wright, Paternoster Row.

HOMOGENEOUS.—Any substance or part made up of similar parts, as the lungs, composed of an immense collection of air-cells, and their surrounding tissue; the opposite of heterogeneous—any substance made up of dissimilar parts or atoms.

HONEY, *Mel.*—The sweet juice of flowers and plants, elaborated by the bee from their nectaries, and deposited in the form of liquid sugar in the wax cells of its comb. The quality of the honey, both in flavour and richness, depends greatly on the character of the country over which the insects roam for their food.

The bees of Sicily were noted by the ancients for the remarkable excellence of the honey they made, the island at that time being a perfect garden as respects flowers, fruits, and agricultural produce. Till the introduction of cane sugar, honey was universally employed in Europe for sweetening purposes, and for the manufacture of several intoxicating beverages, such as hydromel and metheglin. Honey is used in medicine as an emulsion, expectorant, and laxative, and is combined with vinegar and squills to make an expectorant syrup,—such as simple oxymel and the oxymel scillæ, the dose of which, for coughs, colds, and hoarsenesses, is from 1 to 2 drachms.

HONEY SOAP. See SOAP.

HONEY WATER.—A very agreeable perfume, made by dissolving the essential oils of bergamot, cloves, and lavender, a few drops of otto of roses, and some musk, in spirits of wine: after digesting for some days, and staining with Saunders' wood, it is filtered and fit for the toilet.

HOOPING-COUGH, or *Pertussis.*—A spasmodic and convulsive disease, generally accompanied with some amount of inflammatory action in the bronchial tubes. This disease, so dreaded by parents where there are many young children—not from its being either infectious or contagious, but from the aptitude of children to imitate the sounds or actions of each other,—usually commences with the symptoms of a common cold, and after the lapse of a week or ten days, assumes its distinctive feature—the spasmodic back-draught or inspiration, causing the hooping sound so confirmatory of the disease. The features that always mark and distinguish this cough from all others are, that it comes on in fits or paroxysms at uncertain periods; that the cough has always a dry, hard, unsatisfactory sound; and after a succession of rapid expirations or coughs, there occurs one sudden, strong inspiration, the patient throwing back its head and emitting the long hooping note which stamps the disease; another and another succession of hard coughs follow, terminated by another inspiration before the paroxysm passes off, and the exhausted child falls back, stiff and screaming, into the nurse's arms, a little glairy mucus collects in the mouth, or the contents of the stomach are thrown up. The fit now ceases, and the little patient has a few hours of remission. With very young children, the nurse must be constantly on the watch to lift up the patient the instant the cough commences, or it may in its struggles force the blanket or clothes in its mouth, and produce suffocation.

TREATMENT.—The first object to be considered is to guard against inflammatory action, by acting on the bowels by an aperient powder, such as prescribed below, by avoiding exposure to cold, and by a light, farinaceous diet of custards and puddings, made with Dr. Ridge's Patent Food.

Aperient Powders.—Take of—

Powdered jalap . . .	24 grains.
Powdered scammony .	24 grains.
Calomel	12 grains.
Antimonialis	12 grains.

Mix thoroughly, and divide into twelve powders for a child of from one to two years of age; into nine powders for a child from two to four years; and into six powders for one from four to nine years. One of the twelve powders is to be given twice a day till the bowels are well acted on, and then one every other day, to keep the system cool and regular. The same arrangement is to be adopted with the other divisions, discontinuing the powders after the effective action has been established, and only giving one every second or third day, according to the state of the bowels.

The chief object is next to procure a free expectoration and vomiting, so as to reduce the length and obstinacy of the paroxysm. When the cough is dry and hard, and unattended with expectoration, it will be necessary to give an emetic, of equal parts of ipecacuanha and antimonial wine, from a tea to a table spoonful, according to the age of the child; or 5 or 10 grains of the ipecacuanha powder, mixed in warm water, may be given as a substitute. When expectoration has been once excited, it is to be continued by occasional doses of the following mixture. Take of—

Carbonate of soda or
potass . . . . . . 1 drachm.
Mint water . . . . enough to make 3 ounces in all. Add—

Syrup of squills . . .	3 drachms.
Antimonial wine . . .	2 drachms.
Laudanum	20 drops.

Mix: give from a teaspoonful to a dessertspoonful every three or four hours. When the child is stout, of a croupy disposition, and liable to inflammatory action, the emetic and above mixture should be followed up by rubbing the camphor embrocation on a part of the chest till it produces a crop of small pustules, and by giving one of the annexed powders between each dose of the expectorant mixture.

Embrocation.—Take of—

Camphorated oil . .	½ ounce.
Croton oil	30 drops.

Mix: to be rubbed on with soft cotton on the chest night and morning till the eruption takes place.

Expectorant Powders.—Take of—

Lump sugar (powdered)	1 scruple.
Tartar emetic . . .	2 grains.
Grey powder	15 grains.

Mix, and divide into twelve powders for a child from eighteen months to three years; into eight powders for a child from three to five years; and into six powders for all above that age.

As long as the appetite is good, the breathing easy, with an absence of fever, there is little cause of apprehension; the child will recover. Change of air will often effect more for hooping-cough than all the medicine employed; and whenever the weather admits of removal, the patient should be taken away; the only caution necessary is to keep the child warm and dry.

We have already stated that this is a spasmodic disease, and that children acquire it from one another by imitation; the parent, therefore, should take care to check, by a word, a look, or gesture, each child the moment the cough commences, so as to intimidate the little one, break the fit of the cough, and prevent its reaching the spasmodic hoop. Most children may be cured in a couple of days by a dose of laudanum; but as this practice would not remunerate medical men, it is never adopted; and though the author of this work can vouch for the safety and expediency of the plan, he would not counsel any *non-professional* person to adopt it on a patient under twelve or fifteen years of age: at that stage of life, from 10 to 15 drops of laudanum, in a little water, given twice a day, will be found speedily to break the *spasmodic action.* During convalescence the patient must be supported by a full diet, and strengthened by quinine and steel wine, with air and exercise.

Roche's Embrocation is recommended as an external application, and is often beneficial. A popular remedy, very much in vogue some years ago, was prepared by boiling 10 grains of cochineal with 30 grains of salts of tartar in 4 ounces of water, adding sugar, and straining. The benefit derived from this mixture depended solely on the tartar or potass used, and in no respect on the cochineal.

HOPS.—The *Lupulus humulus.* This well-known plant is used in medicine as an elegant and grateful bitter, both in tincture and infusion; and pillows stuffed with hops are sometimes used to produce sleep in cases of fever, where the employment of narcotics would be injurious.

HORDEOLUM.—The surgical name for a small tumour at the root of the eyelashes. See STY.

HORDEUM.—The Latin for barley. See PEARL BARLEY.

HOREHOUND.—The *Marrubium vulgaris* of the botanist. This well-known plant, so highly esteemed for its expectorant properties, though at one time extensively used, is now almost out of date with medical men, the only preparation of it kept being a syrup.

Half a wineglassful of the infusion of the leaves, with a little honey or sugar, and two drachms of paregoric, makes an excellent expectorant in dry, irritating coughs, such a dose being repeated three or four times a day; or a teaspoonful of the syrup, with five drops of laudanum, and twenty drops of spirits of nitre, may be substituted in the asthmatical coughs of old people. The confection called "candied horehound" is also a good and agreeable expectorant, if taken in moderation.

HORSERADISH. — The *Cochlearia Armorica.* The horseradish is too well known to need description: as a condiment, it is one of the most useful of our domestic salads and therapeutic vegetables, being a warm, agreeable, stimulating stomachic, promoting digestion, and giving vigour to the gastric juice. Medicinally, horseradish acts as a condiment, stimulant, emetic, diuretic, diaphoretic, and in large doses as an emetic; while, when scraped, mixed with vinegar, and applied to the skin, it acts as a rubefacient, and, if kept on long enough, as a blister: it is also an antiscorbutic and antiseptic, arresting decay in animal fibre.

chief use to which it is applied in
ne is as a stimulating diaphoretic
matism, and as a counter-irritant
onic rheumatism and paralysis,
l in a scraped form, wetted with
r, and laid on the part affected.

JSELEEK. — An excellent but
sed plant, so called from growing
equently on the roofs of cottages.
NGREEN.

JSEMAIDS' KNEE.—The disease
bears this name is a small encysted
: formed on the knee-cap in per-
no are in the practice of kneeling
ntly on stones and other hard sub-
; and as housemaids, from having
l to perform much of their work
ning floors and steps, are very
to this form of tumour, it has
lled the "Housemaids' knee." The
g is seldom painful except when
upon, but if neglected is apt to
rate, and induce a diseased condi-
the cartilages of the part, known
name of White Swelling.

TREATMENT consists in either
a strong, straight needle through
ticle and sac, so as to allow the
of the fluid contained in it, and
a bandage and pressure, promoting
ion; or else an incision is made
the cuticle, the sac grasped by a
forceps, and the round tumour
d bodily.

MERUS OS.—The bone of the

MORAL PATHOLOGY.—A once
te theory of physicians, by which
ccounted for the remote cause of
ases by attributing them to a dis-
state of the humours or fluids of
y.

MOUR.—A medical term, applied
ly to liquid excretions or secretions,
specially to the three solid hu-
of the eye,—the Aqueous, Crystal-
nd Vitreous Humours, which see,
.

MP-BACK. See SPINE, DISEASES
l MALFORMATIONS.

MULUS LUPULUS.—The Hop,
ee.

LOIDES. — The name of the
cellular membrane in which the
s humour of the eye is contained.

DATID.—In anatomy, a hydatid
all sac or cyst filled with a trans-
fluid, which forms on some of the
nal organs, particularly the liver,
ds to a complete degeneration of
an.

HYDRARGYRUM. — The scientific name of mercury. See QUICKSILVER.

HYDRATES.—Chemically, these are salts consisting of some solid body, or base, and water, such as the oxides of metals. The term is antagonistic to *anhydrous* salts, or those in which no water enters into their combination. Quicklime is an example of the latter order of salts.

HYDRO.—Water. The word is a prefix to several medical terms, such as hydromel, hydrocele (a watery tumour), and—

HYDROCEPHALUS.—Water in the Head, which see.

HYDROCYANIC ACID, or Prussic Acid, which see.

HYDROGEN. — One of the simple elements; a highly inflammable gas, and so named from its forming the chief component of water. Hydrogen, the *phlogiston* of the ancients, is the lightest of all the gases, and was formerly used for inflating balloons. Hydrogen enters largely into all vegetable substances, and combines in different proportions with oxygen, carbon, and nitrogen, to form the most opposite of compounds, such as water, carburetted hydrogen (or coal gas), ammonia, sugar, starch, &c.

HYDROMETER.—An instrument for weighing the relative specific gravities of fluids, and the article used by distillers and publicans to test the strength of their spirits.

HYDROPATHY, HYDRO-THERAPEUTICS, or the WATER CURE.—A mode of treating certain neuralgic, cutaneous, stomachic, and hypochondriacal diseases by the external and internal use of cold water, arranged or systematized by Dr. Priessnitz, and which, of late years, has been largely introduced into this country, in many parts of which large establishments have been erected for the reception of patients, and the perfect practice of the system.

The curative properties of cold water have been known to the profession from the earliest ages; all, then, that is due to Dr. Priessnitz lies in the fact that he claims the merit of having adapted rules to the various operations, multiplied the modes of applying the water, and gave the system so arranged its name of Hydropathy.

Water, whether applied to the body cold or tepid, exercises three effects on the system: first, it lowers the temperature; second, it acts as a tonic to the nerves, weakened by sickness or disease;

and, lastly, it produces a specific remedial effect on the skin in many cutaneous affections. The temperature at which the water is applied varies from 50° to 80°, the average temperature used being 60°. The curative properties of cold water in some diseases are very great, and its effects on the system very remarkable; still it is a remedy that, injudiciously used, may be followed by very serious results, for which reason no non-professional person would be justified in prescribing or using it.

The forms in which hydropathy are applied are—1st, the shower bath; 2nd, the douche; 3rd, the compress; 4th, the wet sheet; 5th, the packing; and 6th, the various forms of hot air, steam, and vapour, or, in other words, the Turkish bath. Beneficial as cold water is when applied scientifically as a system, much of its curative effect is increased by the strict attention paid to the general health of the patients at all hydropathic establishments, by the dietary on which they are placed, the exercise and cheerful occupation pursued by the inmates, and, lastly, by the friction employed.

Rheumatism, gout, inflammatory fevers, diseases of the digestive organs, and chronic affections of the skin, are the complaints most generally benefited by a course of hydropathy, and the class of cases usually found under treatment at such establishments. Of the shower and aspersion bath, with the *douche*, we have already spoken at length under Baths, which see. The *compress* consists of a long bandage, of 10, 15, or 20 yards in length, and 6 or 8 inches wide; this, when well wetted in cold water, and carefully wrung out, is to be applied round the chest, stomach, and abdomen or limb in its damp state; if for the trunk or belly, it must pass round the body repeatedly, covering the part for several times. A piece of oil-silk, or gutta-percha sheeting, is to be applied above the compress, to prevent hasty evaporation, and the whole so retained for some hours, and only removed about three or four times a day, when it is to be again wetted, enveloped in the silk or sheeting precisely as in the first instance, care being taken always to change the compress before it becomes *quite dry*. When used for obstinate constipation, it often acts most beneficially in a few hours. In other cases it seems to produce an aggravation of the evil just before effecting a cure, which in many cases is preceded by a rash on the part of *the skin* covered.

The *wet sheet* and the *packing* are frequently used together, and consist in spreading on a mattress a pair of blankets, on the top of which a sheet wrung out of cold water is laid smoothly; on this the patient, perfectly naked, stretches himself, when the attendant proceeds closely to envelop his whole body in it, except the face, in such a manner as to secure the arms to the side; one blanket and then the other is next closely and securely applied round the body; more clothes, and sometimes a feather bed, are heaped on the imprisoned patient, care being taken, by a napkin tucked under the edge of the blanket, to guard the face from being irritated by the downy filaments; and as the patient is completely powerless, an attendant should be at hand to wipe his face when the perspiration breaks out. The time necessary to keep the person under this pressure depends upon the age, strength, and nature of the disease, and varies from one to six hours. During this time, specified quantities of cold water are given to the patient. For affections of the head, a wet napkin, or a wet nightcap covered with sheeting, is employed. The patient, when taken out of the packing, is well rubbed with wet towels, then thoroughly dried, and put into another bed, well wrapped up, or if strong enough, dressed, and taken for a brisk walk.

Sprains and rheumatic affections of the joints are often greatly benefited by using the compress for several hours a day, the limb or part being frequently encircled by the wet roller or compress.

In all constitutional cases submitted to hydropathy a great portion of the cure is effected by the plain, wholesome diet established, the absence of all stimulants, early hours, frequent bathing, friction, and exercise.

HYDROPS.—Dropsy; an accumulation of water in any part of the body. See Dropsy.

HYDROSTATIC BEDS. See Water Beds.

HYDROTHORAX.—Dropsy of the chest. See Water on the Chest.

HYMEN.—A name given by anatomists to a fold of the delicate lining membrane of the vagina, which, in the shape of a broad crescent, divides the passage, and the integrity of which is considered as one of the tests of female purity.

HYOIDES.—The anatomical name for the bone of the tongue; a small bone, somewhat in shape of a horseshoe, situated at the root of the organ of taste, and assisting to support and give attachment to the pharynx, larynx, and tongue; the muscles which attach it to the tongue, lower jaw, and other parts, receiving the names of hyo-glossus, genio-hyo-glossus, and some others.

HYOSCYAMUS. — Henbane, which see.

HYPER. — A preposition signifying *above*, or *over*, and forming the prefix to several medical words, as *hyperchloric acid*, an acid with an excess of chlorine gas.

HYPERICUM. — St. John's-wort, which see.

HYPERTROPHY.—An enlargement in the tissues of an organ or part; a diseased condition of the structure, which sometimes totally destroys the function of the organ. The heart and liver are the parts most frequently subject to this organic disease.

HYPNOTIC.—A name formerly given to medicines which produced sleep,—soporifics, such as opium, morphia, henbane, &c.

HYPO. — A preposition signifying *under*, or *below*, and used as a prefix in such words as—

HYPOCHONDRIASIS.—A splenetic melancholy; a functional derangement of the assistant organs of digestion, more particularly, as it is alleged, of the spleen and pancreas.

This is a disease to which English people are supposed to be more subject than those of other countries and more equable climates. To the prevalence of this malady in the gloomy months of autumn and winter is attributed that large per-centage of suicides which annually occur in this country in those seasons of the year. For an account of the symptoms of this fanciful and extraordinary disease, see Meagrims.

HYPOCHONDRIUM.—One of the divisions or regions into which the abdomen is divided, and so named from lying under or below the ensiform cartilage of the ribs. There is a right and a left hypochondrium; the one has the liver, the other the spleen. See Abdomen, *cut*.

HYPOGASTRIC. — A region of the abdomen, or the portion lying under the stomach. See Abdomen, *cut*.

HYPOTHESIS. — In philosophy, a principle or reason founded on some supposition granted, from which the cause and effect may be deduced; a system or doctrine founded on some theory or supposition.

HYSSOP. — The *Gratia Dei* of the old physicians, from its supposed wonderful properties in curing disease; it has, however, been long excluded from practice in this country.

HYSTERIA (commonly called Hysterics). — This disease, though most frequently excited by some uterine affection, is purely nervous in its character, and one greatly depending on some emotional state of the mind. Though females from the age of seventeen to forty-eight are the general sufferers from hysteria, delicate males, and those employed in sedentary occupations, or of a scorbutic constitution, are sometimes affected by it. Among females, the unmarried and those who have never had children are the persons most predisposed to an attack, which may be induced by uterine irregularity, violent emotions, grief or joy, tight lacing, flatulence, or any cause that weakens the stamina of the body.

Symptoms. — These commence by yawning, depression of spirits, flushings of the face, sudden tears, palpitation of the heart, pain in the left side, with a sense of swelling, and a feeling as if a ball was rising from the stomach up into the throat, with a sense of choking, the patient being convinced that there is an actual round substance lodged in her gullet. From this symptom the disease has been named *Globus Hystericus*. The patient now becomes faint and restless; the body and limbs become agitated with wild and irregular actions; she is seized with fits of alternate tears and laughter, with incoherent and noisy ejaculations; while the muscular contortions become so violent that many men are often necessary to restrain the actions of a delicate girl. After remaining in this state from a few minutes to in some cases many hours, there is a belching of air from the mouth, when, with a heavy sigh or a few deep sobs, she slowly recovers, and either falls into a sleep, or may suddenly start up, and go through the same chain of symptoms, having a succession of fits and intermissions. A peculiarity in hysteria is that it may assume the characters of almost every other disease; the only disease, however, with which it could be confounded is epilepsy, and from that it is distinguished by the patient being partially sensible in hysteria, and totally insensible in epilepsy; by the foaming at the mouth in the latter, and the absence of it in hysteria, in which there is always a twinkling or trembling of the eyelids.

TREATMENT.—In young, robust patients or country girls, bleeding is sometimes necessary to abate the violence of the spasms.

In slight, and indeed ordinary cases, the simple practice of cutting all the strings and laces at once with a knife, laying the patient on her back and dashing cold water suddenly in the face, and holding some hartshorn to the nose, will generally effect a recovery. If not, however, 30 drops of sal volatile, 30 drops of spirits of lavender, and 10 drops of spirits of ether in a wineglassful of camphor water, given directly, will, if the face is dried and again suddenly aspersed with cold water, be found sufficient to rouse the patient and break the spasmodic action. In very severe cases, however, an emetic of 15 grains of white vitriol in warm water will be the most effective and expeditious remedy.

A few hours after the subsidence of the attack an aperient pill should be given, either of assafœtida and aloes, or of compound colocynth, and means taken to recruit the strength, or remove the immediate cause of the attack; in general, steel wine and quinine will be found the best remedies,—a teaspoonful of the first every four hours, and 1 grain of the latter three times a day; or the iron and bark may be combined, as in the following

Tonic Powders.—Take of—

Prepared carbonate of iron	2 drachms.
Sulphate of quinine .	6 grains.

Mix, and divide into six powders: one to be taken three times a day.

I

I is the ninth letter of the alphabet, and till within the last century was always identical with J, for which letter it is still frequently used.

As a numeral, I stands for one, or for as many units as it is severally repeated: when placed before a higher numeral it subtracts from its value, as ix., nine; or iv., four; and when placed after a higher numeral, so many are added as there are units indicated, as vi., six; viii., eight; xiii., thirteen. As an abbreviation, I is placed with E, as in *i. e.*, *id est*, or that is.

ICE. — Congealed water at a temperature varying from 30 to 32 degrees of Fahrenheit. Independent of its general domestic and sanitary uses, ice is occasionally employed to a large extent in medicine, when it is used as an antiphlogistic (to reduce heat and inflammations), a sedative (to produce relaxation from pain), and sometimes as a stimulant (to promote absorption, or restore the circulation, as in frostbite). Ice is most frequently employed in cases of inflammation of the coats or substance of the brain in apoplexy, or other affections of the head, external or internal, when it is beaten into small pieces, and put into a sheep or ox's bladder, and applied in that manner either to the shaved scalp or cut hair. In cases of typhus fever, spasms of the stomach or diaphragm, such as hiccough, excessive vomiting, hæmorrhage from the stomach, and in cases of obstinate heartburn, small pieces of ice, eaten or swallowed, have proved very serviceable. Ice has also been strongly recommended in hydrophobia, and as an application to the throat when much inflamed. In every case it requires to be used with discretion, as, from its depressing influence on the nervous system, it is apt, if retained too long, to produce serious exhaustion. The best preparation for freezing water is a mixture of nitrate of ammonia, subcarbonate of soda, and water, of each equal parts.

ICELAND MOSS, *Lichen Islandicus.*—The Iceland, Carrageen, and Ceylon mosses, with some other varieties, belong to the cryptogamic order of plants, all of which are edible, wholesome, and mucilaginous. The Iceland moss is a parasitical lichen, found on barks of trees, and on the lava hills of Iceland, and the trees and rocks of Upper Norway, from whence much of what is used in this country is brought. Iceland moss, in its dried state, has a faint, aromatic smell, and a bland, bitterish taste. From the aromatic, bitter principle inherent in the moss, it becomes not only a good tonic, but also a stomachic; its principal medical uses, however, are demulcent and expectorant, and it is prepared either boiled in plain water and sweetened with sugar, or with horehound, the rind of a lemon, and then sweetened with treacle or brown sugar, when it makes an excellent mixture in coughs, colds, and oppressive hoarsenesses. Iceland moss has been strongly recommended in consumption and all pulmonary affections as a nutritive aliment; but its efficacy in such complaints very questionable, though there is no ubt it makes an agreeable change in the etetic regimen when formed into a jelly: make this, about 5 ounces of moss are to

ICELAND MOSS.

oiled in a quart of water slowly, till the er is reduced to one-fourth its bulk; 4 ces of lump sugar are then to be added, when dissolved, the whole strained ugh a flannel while hot, and set apart ol and coagulate. To the Icelander moss is an article of immense value, ling him, in years of scarcity, a substite for bread. To effect this, the s is repeatedly soaked and washed, to roy its bitter taste; it is then pressed, g up to dry, and ground into a coarse , which, boiled with milk, makes an llent porridge, or made into dough, or without a little wheaten flour, is d in cakes or loaves, which supply a useful bread.

HOR.—A thin, sanguineous disge from wounds and sores of a phagee character. An exudation consisting atter—pus, and blood, or sanies— times of a greenish colour, often d, and always acrid in its nature, exting the cuticle on which it escapes. r is a diseased discharge from an unthy wound.

HTHYOCOLLA.—The glue of a -gelatine. The professional name of glass, which see.

HTHYOSIS.—Fish-skin; a papileruptive disease of the skin. See , Diseases of.

ICTERUS.—The professional name for the disease called Jaundice, which see.

IDIOPATHIC.—A term used in medical nomenclature for such diseases as arise naturally in the human body, independent of all extraneous causes, and contradistinguished from *symptomatic* diseases, or such as are induced by or spring from some other disease or malady. All diseases belong to one or other of these orders, and are either idiopathic or symptomatic.

IDIOSYNCRASY.—A condition or temperament peculiar to any animal body, whereby it has, either in health or sickness, a peculiar inclination to or aversion against some particular things. Thus, when a man has a predisposition to gout, rheumatism, gravel, or any other complaint, we allude to his idiosyncrasies. The person who faints at the smell of a rose, cannot conquer his aversion for bread, or sickens at the sight of a cat, is commonly said to have antipathies to such and such things and objects; but professionally they are said to be his idiosyncrasies. So strong is this prejudice, antipathy, or idiosyncrasy in some persons, that the most infinitesimal dose of a medicine will produce all the violence of action found after an excessive dose; while to others, the mere *smell* of a drug will produce on the system all the effects of a large dose; and others, again, whose idiosyncrasy is so powerful, that the mere mention of a drug will cause the mouth to become so impregnated with the *taste* of the article only heard or mentioned, that it is difficult, by changing the subject and diverting the mind, to get rid of the offensive taste or impression.

IDIOTCY.—A state of mental imbecility proceeding from a defective or a disorganized state of the brain, resulting in partial or complete fatuity. Idiotcy is a congenital disease, and one of those hereditary misfortunes which are handed down from a succession of weak or diseased parents, propagated by the frequent intermarriages of families of weak or tainted intellect, of those of intemperate habits, and of persons having a scrofulous diathesis. Idiots are divided into the harmless and the mischievous; those with perfect fatuity, and those who possess a glimmering of intelligence, which, in such cases, usually degenerates into malice or cunning.

IGNIS FATUUS.—Will-with-the-wisp, or Jack-of-the-lantern, as this meteoric exhalation is popularly called.

A gaseous exhalation from churchyards, bogs, and marshy places, or wherever there is much animal and vegetable matter decaying under or on the surface of the soil, and which gas, taking fire, flits with a pale blue flame over the ground as long as any hydrogen or phosphorus is given off to maintain the flame.

IGNIS SACER, or HOLY FIRE, or ST. ANTHONY'S FIRE.—Another name for Erysipelas, which see.

ILEX.—The scarlet oak, or holly.

ILIA.—The flanks, or small intestines. There are many terms and names derived from or compounded of this word; thus the *os ilium*, or haunch-bone, assists to form the abdominal cavity of the pelvis; while the muscles in and about it are called the *iliacus internus, externus*, &c.; the arteries, veins, and nerves of the part, the iliac external and internal, with several others. See PELVIS.

ILIAC PASSION, OR ILEUS. — A very severe form of colic, in which the twisting motion felt at the navel, the cramps, and vomiting are all greatly exaggerated, the vomiting in particular being most distressing, not only voiding the contents of the stomach, but sometimes even those of the bowels.

The TREATMENT consists in relaxing the spasm, in the first instance, by a large dose of laudanum, and by an ounce of castor oil; or by a draught of 6 drachms of Epsom salts, with 10 grains of rhubarb, and 2 ounces of infusion of senna. Should these not act on the bowels within a few hours, 2 drops of croton oil should be placed on the tongue, and one of the following pills given every four hours till the bowels are thoroughly opened. Take of—

Compound colocynth pill . . . . 1 scruple.
Calomel . . . . . 12 grains.
Extract of henbane . enough to make a mass, which divide into four pills.

Injections of Epsom salts, warm water, and castor oil, or of merely warm gruel, are to be thrown up the bowels, according to their state. In very obstinate conditions, when the bowels seem to defy the action of all medicines given, cold water, or a bag of powdered ice, suddenly applied to the abdomen, will often, in a few minutes, produce a copious action on the intestines. In some cases it is necessary to bleed, to use the warm bath, and give tobacco or opiate injections, effervescing draughts, and carminatives, with assafœtida. See COLIC, and INFLAMMATION.

ILLUSIONS, SPECTRAL, occur in many different states of system, and vary in their intensity. Sometimes they occur to imaginative persons in perfect health, sometimes to persons suffering from indigestion, or debilitated by long illnesses, or after mental excitement, or in consequence of suppressed discharges. They have every degree of intensity, from a flash of light, a circle of colours, or an indistinct outline, to a perfect picture, not distinguishable from a real object. In some instances they can be called up at will, in others they are quite involuntary, and in others, again, they are partly involuntary and partly subject to the will. Müller states that in his case they were involuntary. The poet Goethe could call them up by an effort of the will, but had no power over them when once produced.

Several interesting cases of *ocula spectra*, so closely resembling real objects as not to be distinguishable but by the most careful exercise of comparison and judgment, are related by Sir David Brewster, in his work on natural magic, and by Sir Walter Scott in his "Demonology and Witchcraft." That of Nicolai, the Berlin bookseller, is not the least remarkable, and was distinctly traced to the suppression of an habitual discharge of blood by hæmorrhoids, the immediate exciting cause being a violent fit of passion.

IMAGINATION.—Of the intellectual faculties, the imagination is that which has the strongest affinity with the emotions and passions, for its operations, like theirs, are attended by excitement. It seems, indeed, to hold a middle place between the intellect on the one hand, and the passions on the other, adding vigour and originality to thought, whilst it lends attraction to the objects of desire, and gives intensity to every effort by which they can be compassed. Hence the twofold power of imagination.

Imagination is the only intellectual faculty which exercises a direct influence on the bodily organs, these organs being, as already stated, the organs of sense. It acts by producing in them, or in the parts of the brain with which they communicate, the same state which is usually brought about by external objects actually presented to them. See MALFORMATIONS, and PREGNANCY.

IMITATION.—The imitative power of the young is most extraordinary. A child associated for a few days with a person who stammers will, if not instantly hecked, acquire a habit of stammering hat a lifetime may fail to eradicate. arents should, on account of this facility f imitation, be most careful, especially ith female children, in removing them om the presence of a case of epilepsy, t. Vitus's dance, hysteria, or hooping-ugh, as it is notorious that, if at all of citable natures, they will be seized with itation fits, similar in all their features the real disease. As we have elsewhere ated, under Hooping-cough, children py the sound, till at length the imitated sease becomes quite as virulent as the ue one; and if they cannot be excluded m hearing the patient, every time the pyist begins to cough she must be ecked by some impressive admonition intimidating gesture.

IMMODERATE FLOW OF THE ENSES. See WOMB, DISEASES OF.

IMPERIAL.—The name of a cool, freshing summer drink, made by pouring quart of boiling water on four drachms cream of tartar, a lemon cut in slices, d five ounces of sugar, stirring well and lowing it to stand till cool, when it comes a pleasant acid drink in fevers, c. A species of lemonade. See DRINKS.

IMPERIAL MEASURE.—This is mposed of eight pints of twenty ounces ch, or four quarts of forty ounces each, the gallon.

IMPETIGO.—A pustular eruption of e cuticle, attended with much itching; kind of tetter. See SKIN, DISEASES .

IMPLUVIUM.—An old medical term r a Shower Bath, or gentle sprinkling of e body with water.

IMPOTENCY.—Loss of virility; sculine incapacity. This is a disease hich may be either congenital (born with e child), or it may arise from organic sease or functional derangement acired in adult age. With young men is very frequently the result of a dissiated career and the force of imagination, d can only be cured by a course of oral and physical therapeutics. See EPRODUCTIVE ORGANS, DISEASES OF.

IMPREGNATION. See PREGNANCY.

INCOMPATIBLE SALTS.—A term sed in pharmacy to express such salts as ill not combine in medical preparations ithout decomposition, and the consequent change of their properties; thus, arbonates and sulphates, or muriates nd nitrates, are incompatible in the same ixtures. If a carbonate of magnesia is combined with a sulphate of soda, a decomposition ensues, by which the character of both articles is impaired, and their properties materially injured.

INCONTINENCE OF URINE. See URINARY ORGANS, DISEASES OF.

INCUBUS. See NIGHTMARE.

INCUS.—An anvil. The name of one of the small bones of the ear connected with the *malleus* and *stapis*, or hammer and stirrup, completing the bony chain which conveys to the tympanum the tremors of sound brought to the ear.

INDIAN FIG.—A fruit belonging to the *cactus* family of plants. See PRICKLY PEAR.

INDIAN RUBBER.—The inspissated juice of the syringe tree, one of the most magnificent trees in India. Indian rubber is only used for medicinal and surgical appliances. See CAOUTCHOUC.

INDIGESTION.—Dyspepsia. A painful, torpid, functional derangement of the stomach, giving rise to the most opposite and varied train of symptoms, and producing a complication of disorders which often baffle the most learned practitioner either to classify or to treat.

The CAUSES of indigestion are extremely numerous, for so intimate is the reciprocity between the mind and the stomach, that whatever affects the one influences the other. Whatever cause weakens the system is certain to debilitate the stomach, and at the same time impair its function. Spirituous liquors, tea, narcotic drugs (such as opium), tobacco, sedentary occupations, hasty eating, and imperfectly masticated food; a vegetable or farinaceous diet, the operation of strong medicines, exposure to cold or damp, a diseased state of the skin, and a deficiency both of saliva and gastric juice, are among some of the most general causes. Besides these special causes, however, any organic or functional disease of the body, particularly of the liver, may, and repeatedly does, induce dyspepsia.

The most usual SYMPTOMS are want of appetite, distension of the stomach, with flatulent eructations, debility, languor, dejection, nausea, a feeling of exhaustion and sinking at the stomach, particularly after meals; heartburn, either accompanied with obstinate constipation, or by diarrhœa. Sometimes there is palpitation, always headache of more or less intensity, often affecting the eyes, causing dimness of sight, specks or motes before the vision, or flashes of light appearing to be emitted from the optic nerve;

ringing in the ears, rumbling noises, drummings, whistling sounds, and various unpleasant noises. The taste also suffers more or less, and a constant metallic, acid, or brackish taste is felt in the mouth. The body is hot and feverish, the pulse small and feeble; the sleep is disturbed by short, unrefreshing slumbers, or rendered exhausting by fearful dreams or nightmare; there is often perspiration, with thirst; the water is loaded with gravel, and deposits either the red or white sand; the countenance is sallow, the skin dry, and the objects seen by the eye are often of a pale complexion, or of an unnatural colour. All these symptoms are seldom found existing at one time or occurring in one case, but as they all belong to the disease, and some of them may make their appearance at any time, they should be borne in mind as evidences showing what serious symptoms may arise from mere *functional* derangement.

Treatment.—Before laying down the simplest mode of treatment, it is of the utmost consequence that the patient should be fully impressed with this important fact,—*that unless a total change is made in the habits, dietary, mode of occupation, and everything that may have directly or remotely led to the disease, and the patient adopts a contrary practice, the best remedial measures ever suggested will prove inoperative and valueless.*

INDIGESTION THE RESULT OF FLATULENCE, and a Vegetable or Farinaceous Diet.—When the cause can be fairly traced to some such origin as the above, the dietary should be immediately altered, and a proper proportion of animal food introduced, the soft foods changed for aliment of a closer texture; cabbage, broccoli, and such articles avoided, and potatoes and bread substituted; and two of the following pills, taken at bedtime every second night, for two or three occasions, and one of the powders an hour before breakfast, dinner, and supper, for two days; and then one a day before dinner, for three or four days longer.

Aperient Pills.—Take of—

Powdered aloes . . .	24 grains.
Rhubarb powder . .	12 grains.
Extract of colocynth .	24 grains.
Assafœtida	6 grains.
Calomel	12 grains.
Oil of carraway seeds .	6 drops.
Soap	enough to

make into a mass, which divide into twelve pills.

Stomachic Powders.—Take of—

Powdered rhubarb . .	24 grains.
Powdered colombo . .	18 grains.
Powdered ginger . .	12 grains.
Carbonate of soda . .	1 drachm.

Mix, and divide into twelve powders.

INDIGESTION ARISING FROM DEFICIENCY OF BILE, and some Derangement of the Liver.—Whatever is objectionable in the diet must, in these cases also, be corrected, all stimulating condiments avoided; the flesh-brush used vigorously over the region of the liver every morning, one of the following pills taken three times a day, and one of the powders an hour before dinner each day. Take of—

Compound rhubarb pill	½ drachm.
Blue pill	½ drachm.

Mix, and divide into twelve pills.

Take of—

Grey powder	12 grains.
Powdered rhubarb . .	12 grains.
Powdered ginger . .	9 grains.
Colombo powder . .	6 grains.

Mix, and divide into six powders.

INDIGESTION PROCEEDING FROM A DEFICIENCY OF GASTRIC JUICE, or a Loss of its Solvent Properties.—In such cases as these, usually indicated by a want of that copious flow of saliva which generally attends mastication, relief is sometimes obtained by taking a few teaspoonfuls of vinegar in a wineglassful of cold water, and 6 or 8 drops of muriatic acid, a few minutes before dinner; or half a wineglassful of the following mixture a quarter of an hour before each meal. Take of—

Common salt . . .	2 drachms.
Water	6 ounces.
Carbonate of potass .	1½ drachms.
Saltpetre	1 scruple.

Dissolve, and add—

Vinegar	2 ounces.
Muriatic acid	25 drops.

Mix. While, to excite the internal coat of the stomach to a healthier secretion of gastric juice, one of the subjoined pills should be taken three times a day, an hour before the meals, and one of the tonic powders two hours after each meal. Take of—

Sulphate of zinc . . .	15 grains.
Powdered ginger . .	½ drachm.
Extract of gentian . .	enough to

make a mass; which is to be divided into twenty small pills. Take of—

Dried carbonate of soda	½ drachm.
Sulphate of quinine .	6 grains.
Rhubarb powder . .	12 grains.

Mix, and divide into twelve powders.

the stomach is naturally weak,
always languid, and there is an
rant of animal heat, a teaspoonful
ry's powder, taken in peppermint
ro or three times a day, will be
considerable service; especially
care is taken to keep the bowels
open, by the use of a compound
pill.

e cases of indigestion, where the
as been of long standing, the
has become so debilitated that it
the power to digest animal food;
he presence of animal fibre of
, however tender and succulent,
reat inconvenience, and a heavy
sensation at the pit of the
in such cases, till the organ has
l its tone by a careful course of
d warm stomachics, the Reva-
bica is one of the most beneficial
on which the patient can be
e meal of which it is composed
g a large proportion of nutrient
In cases of this nature, the use
rmacher's belts, worn across the
for a few hours each day, with cold
exercise, the employment of the
waters, particularly those of Bux-
often effect more benefit than
of medicine.

are a few general rules which
suffering from dyspepsia, or indi-
will do well to study, and by
which they may hope to obtain
of health far exceeding that pro-
the aid of medicine alone. Avoid
ive action on the bowels; if me-
ust be taken, let it be a warm,
rient pill, the rhubarb or assa-
Let the diet consist of a due
n of animal and vegetable sub-
-meat and bread, or potatoes, and
avoiding flatulent vegetables, pas-
broths. Let every mouthful of
well masticated, and never swal-
ll it is thoroughly mixed with
at slowly, take the meals at
ours, and give the body at least
our's perfect rest before attempt-
occupation after each meal. The
should be always well covered
tected from the cold; exercise
orm one of the most important
each day; the skin kept perfectly
occasional baths, and the daily
of the flesh-brush.

NT.—Under this head, it is not
intention to explain the various
s which constitute the phenomena
n life as it is displayed at the dawn of existence, but to enter also on those ailments, affections, and diseases appertaining to that period of life, and which justly deserve the appellation of infantile diseases. At the same time, to make our subject complete in all its parts, we shall give such directions concerning the management of infants, from the moment of their birth till they pass under the denomination of childhood, as we deem necessary as a help and a guide to mothers, and all who may consult this work as an authority on such matters; while, that nothing practically useful may be omitted in connection with the subject, we shall enter at large on the food of infants, and particularly on that portion of so important a branch of the subject, the rearing of infants by hand.

To give perspicuity to our theme, and prevent all confusion in what we have to say, the subject of "Infant" will be divided into the following sections:—The Infant, its Physical Organization, Food, and Management; Infantile Diseases; and Bringing up by Hand.

THE INFANT, ITS PHYSICAL ORGANIZATION, FOOD, AND MANAGEMENT.—The manner in which the several pieces of the human mechanism perform their functions, irrespective of each other, yet all harmonizing together to produce one result—life and health,—is one of the sublimest studies that can engage the contemplation of man; and at no portion of the seventy years' span accepted as the boundary of human life can the study be more fitly or more interestingly made, than at the epoch of existence when the fabric, new from the Creator's hand, perfect in all its parts and attributes, first receives the Promethean spark of life, and as a distinct being takes its place in the great family of nature.

"What a piece of work is man!"

Once admit air into the mouth and nostrils of the new-born babe, and the collapsed lungs expand, the apathetic heart beats, sending the blood in rushing streams to the remotest part of the body; the mouth secretes saliva, and the stomach its solvent fluid, to soften and digest the food; the liver forms its bile, to separate the nutriment from the *débris* of the aliment; the kidneys perform their office, and carry off the unneeded salts of the body; the eye elaborates its tears, to facilitate motion, and give that glistening charm to the organ that constitutes its beauty and expression, while a dewy moisture exuding from the skin protects the surface of the body from the extremes of heat and cold, and, by 20,000 mouths, pours in imperceptible streams the redundancy of moisture from the system. All these, and they are but a few of the vital functions always taking place in the human frame, are the instant result of one gasp of life-giving air.

That the mother, however, may know something more of her infant than the mere material beauty on which she gazes with such delight, and may have a more perfect understanding of the "matchless piece of work" entrusted to her maternal love, and be thereby better able to understand its wants and minister to its necessities, we shall proceed to explain some of the most important operations of life, and shall commence with the LUNGS, or the function of respiration.

The effect of air on the new-born child is one of the most wonderful operations in nature: the instant the atmosphere comes in contact with the soft, warm flesh, a tremor runs through the lips, convulsive twitchings contract the muscles of the face, the nostrils expand, a spasmodic gasp opens the chest, the air rushes through the openings of the mouth and nose, enters the lungs, and the ribs, so lately flat, become round and heaving, when a sob, a pant, and then a cry, sends the new blood bounding through the infant body, which, in an instant, from the flabby white, becomes pink and elastic. With each inspiration and every cry, the chest of the infant becomes more fully expanded, and the lungs more completely dilated. To the anxious mother, the first utterance of her child is doubtless the sweetest music she ever heard; and so, indeed, it should be, and the longer and more lustily it cries, the greater should be her delight, for every noisy exclamation the infant makes, opens its chest and pours into its lungs larger volumes of oxygen and life.

THE HEART.—Having heralded its own existence by a longer or a shorter fit of crying, the infant, after a few minutes, subsides into quietude. At the same instant that the air rushes into the lungs—at the first gasp,—the valve between the two auricles of the heart (see HEART) closes like a door, and the blood, which had previously passed through it, is thrown into another channel, and rushes into the lungs, where at every gasp it is exposed to the air, absorbs the vital element from it—the oxygen,—becomes arterial blood, *fit for* the building up of the body, and in this condition is brought back to another portion of the heart, from whence, by the great artery of the body, the *Aorta*, it is sent to every part of the system, till all its oxygen or vitality is expended, when the veins, beginning where the arteries terminate, collecting all the refuse blood, take it back to the heart, to be sent again into the lungs, to be once more converted, by the breathing of the child, into arterial blood, and again and again to be distributed over the body.

THE SKIN.—Many persons suppose that the cuticle that envelopes the body is a mere covering to the flesh, an envelope, in fact, merely to keep the parts compact and in their place; this is a great mistake, and one that it behoves a mother most particularly to avoid. The skin is designed by nature to act not only as a covering to the body, but to perform the duty of a multiplicity of drains or common sewers, and carry off from the body, in the form of sensible and insensible perspiration, all the waste and poisonous moisture of the system. Besides these two purposes, the skin performs a third and even more important function in the great economy of life; it acts as an immense *lung*, and carries on a species of respiration analogous to that of the lungs themselves. The skin is perpetually *inspiring* air, and *expiring* moisture. So intimate, indeed, is the connection or sympathy between the skin and the lungs, that whatever affects one influences the other. This is the reason why, in all eruptive diseases, such as measles, scarlet fever, small-pox, &c., the breathing is so oppressed before the rash is thrown out on the skin; and why inflammation of the lungs is to be feared when any of these eruptions are suddenly driven from the surface. This also is the reason why, in all cases of scalds and burns, the child or the adult suffers such difficulty of breathing; and also why cold or wet, applied to the skin, causes oppression of the lungs, cough, and those symptoms to which the name of influenza and catarrh is given. The great practical advantage derivable from this fact, is the knowledge that whatever relieves one benefits the other; hence the immense importance of hot baths in all affections of the chest, lungs, and skin.

The importance of this knowledge to mothers in the nursing of infants cannot be over-estimated, for by it they will know the shortest and safest way to relieve any oppression at the chest of their children, namely, by drawing the blood from the lungs to the skin, by the means of a hot bath to the entire body.

The **STOMACH** is the next and the last organ to which we deem it necessary in this place to advert. But though the stomach is the great centre of the nutrition of the body, it is by no means the only organ connected with the important process of digestion. The mouth, tongue, teeth, gullet, and small intestines all play distinguished parts in that function, while the salivary glands, liver, spleen, and gall-bladder materially assist the process. Next to respiration, digestion is the chief function in the economy of life, as without the nutritious fluid called *chyle*, obtained from the digested aliment, there would be nothing to supply the constant waste of the blood. The stomach is a muscular bag, connected by the gullet with the mouth above, and below with the first part of the small intestines—the *duodenum*. The function or duty of the stomach is to secrete from the small arteries on its inner surface a sharp, clear, acid fluid, called gastric juice, which possesses the power, aided by the warmth and motion of the stomach, to soften, break down, and dissolve all the food that enters its cavity. As soon as the food has been made into a soft, pulpy mass, it passes out of the stomach, and enters the duodenum of the small intestines, where it is mixed with the bile from the gall-bladder, which immediately separates the digested food into the chyle —*the very essence of all the food taken*— and the indigestible refuse, which is carried off by the bowels, while the chyle, taken up by a set of vessels, is conveyed to the heart to replenish the waste caused by the circulation through the system. The stomach *cannot digest fluids*, however nutritious they may be; and unless that nutritive part can be separated and rendered solid, the stomach can have no effect upon what is put into it. In that case the fluid is *absorbed*, and after a short time carried out of the body by the kidneys, skin, and bowels, and, nothing being left for the stomach to digest, the system becomes low and exhausted.

Nature, however, has made provision for the infant, who, living for nearly a year entirely on liquid aliment, would soon die unless some means were adopted whereby the stomach could perform its function. The MILK on which the infant lives consists of three parts—the oil, or butter; the caseine, or cheese; and the serum, or whey. As soon as the milk enters the child's stomach, and before as a fluid it can be absorbed, the acid of the gastric juice acts on it, exactly as, in making cheese, the rennet does on warm milk, separating it into two parts—the curd, or cheese, and the thin, watery part, or whey. The solid curd the stomach at once digests, and passes into the small intestines, where the bile further separates it into chyle, which is carried to the heart to make good the waste of the body, and give health and strength to the child. This, then, is the simple process of an infant's life—milk converted into cheese, cheese into chyle, chyle into blood, and blood into flesh and bone.

All children come into the world in the same imploring helplessness, with the same wants, and demanding from the mother's love, or from the nurse or attendant, the same assistance, the same protection, and the same fostering care.

We have already described the phenomena exhibited by a new-born child when it first breathes; but though this is the general rule, it sometimes happens that the infant *does not cry*, or give expression to any audible sound; or if it does, it is so low and faint as scarcely to deserve the name of vital action. As soon as this state of torpid existence is discovered, the child should be turned on its right side, and the whole length of its spine rubbed sharply with the fingers till the part feels warm from the friction, or till the infant cries clear and full, and the lungs, well expanded, give evidence that life has been satisfactorily established. Sometimes another condition of these mute births occurs, the infant only making ineffectual gasps or pants, at short intervals; the body in the meantime remaining limp and motionless, while the lips, eyelids, and fingers are of a dark blue or purple colour: occasionally one half of the body becomes of the same livid hue, while the other remains white. This languid respiration and peculiarity of colour arises from the valve situated at the opening between the two sides of the heart remaining open, and admitting the venous blood into the arterial side of that organ, and consequently into the circulation. See ASPHYXIA.

To remedy this state of things, the lungs must be dilated to their utmost extent, and as quickly as possible, so as to force the blood with such energy through the lungs as to firmly close the valve, and cut off the improper course of the blood, and make it pass through the lungs before entering the circulation. To effect this desirable object, the child, before being separated from the mother, should be immersed up to the chin in a basin of warm water; and while one hand keeps the head above the water, the fingers of the other must be used to rub the spine, as in the former case, till, between the friction and the warm bath, the child gives utterance to a few feeble, and then a succession of loud, shrill cries; the valve instantly closing, and the livid hue of the skin becoming white under the natural circulation. Sometimes it is necessary to inflate the lungs in addition to the other means already directed, before the child can be made to cry, or the opening in the heart closed. See ANIMATION, SUSPENDED. At the same time that the child is placed in the warm bath, the mouth and nostrils must be cleansed of any froth or mucus that may hang about and interfere with the free passage of the air into the bronchial tubes.

Sometimes, after the utmost exertion, and trial of all these means, the child lies flabby and insensible, and apparently without life. In such seemingly hopeless cases the child is frequently restored by wrapping the body in flannel, all except the mouth, and then laying it on its back on three or four heated bricks before the fire. The heat from the bricks, ascending through the spinal marrow and brain of the infant, has the effect of acting like electricity on the young frame; when the infant, after laying perfectly motionless, as if dead, suddenly cries out with such a volume of sound, that all the mechanism of life is instantly set in motion with the vigour of health and strength. The time the above state of negative vitality may exist in a child, depends upon circumstances, and may endure from ten minutes to three hours. As a general rule, the infant should never be removed from the mother till its own vitality has been established, except when the longer retention of the after-birth would be hurtful to the mother; in that case necessitating the tying of the cord, its separation, and the removal of the child, which is then to be enveloped in flannel, and laid along a row of heated bricks or tiles, or, in default of either, on the top of a warming-pan, moderately heated by a few clear red cinders. The infant, when healthily born, is to be wrapped in a blanket, and allowed to rest for some time before being subjected to the first ablution (see ADVICE TO MOTHERS), which should always be expeditiously and effectually performed.

As soon as the washing has been accomplished, the navel (or that portion of the cord left after separating the child from the mother) is to be attended to, the nurse first examining the cut edge, to see that there is no exudation of blood, and that the ligature is secure; a hole is then to be cut through a small square of folded linen rag, the navel passed through the aperture, and the cloth placed smoothly on the belly; another piece of linen is next to be folded over the navel, which, thus enveloped, is to be laid down on the first piece of cloth; a binder is now to be passed twice round the abdomen of the child, and over the navel, to keep it from injury or displacement, and then the child's dressing proceeded with. Some nurses scorch the linen used to wrap up the navel; but this is quite unnecessary. A little violet powder, however, may be dusted over it before enclosing it in its compress and binder.

The time at which the navel-string separates from the infant's body varies from four to ten, and sometimes twenty-one days. Whenever the separation takes place, the part is to be well dusted with violet powder, a compress of folded linen placed on the new navel, and the binder again applied, to retain the compresses in their place; the whole being examined every day, the part freshly dusted, and new compresses employed, till after a fortnight's wearing of the compress and binder, when it may be laid aside altogether. As, however, it is of the utmost importance that the child should have a good navel —particularly with female children,—the process of separation should on no account *be hurried or interfered with.* Some persons use a piece of thick cork wrapped in linen, and sewn to the binder, as a compress after the separation; and when there is any protrusion of the navel, such a plan is very judicious; but with care and attention such a contingency should not occur. As soon as the child is dressed it should be given to the mother, and as, in ordinary cases, the ceremony of the first toilet is not concluded till full two hours after the birth, that is a very good time for the parent to undertake her first maternal duty, particularly as by that time the mother, if all has gone well, will have in part recovered from the exhaustion consequent on her confinement.

We must here impress on all mothers the obligation they are under to their children, if they would save them from premature sickness and debility, never to llow anything to enter their stomach efore what she herself can supply them om nature's fountain. It is a very mmon, at the same time very blame-le practice, for nurses and mothers to ed the infant, even before it is dressed, ther with sugar and water or a few oonfuls of thin gruel; while some—ill more culpable—pour down its un-sisting throat weak spirits and water. or does the evil end here, for some ficious mothers, in their anxiety to an-ipate nature, and, as they call it, cleanse the baby," actually dose the fant either with manna dissolved in arm water, or with castor oil, and that fore it is an hour old. Against each d all of these most reprehensible prac-ces we emphatically warn all mothers ho have health and strength to perform e mother's holiest duty—suckling her fant. For those mothers who are in-pable of rearing their infants, we shall, urther on, show what steps are to be ken. The milk which nature has sup-lied to the parent for her offspring is, eyond all doubt and question, the most itable and perfect aliment that can be ffered to so delicate an organ as the tomach of an infant. Independent of he temperature of the mother's milk (a ost important consideration), the fluid self is admirably adapted to the wants f the infant in every stage of its early xistence. The first milk formed in the east after the birth of the child is un-commonly thin and poor, possessing little il and still less cheese, and is, in fact, ittle better as a nutriment, than the urse's sugar and water, or warm whey. This, however, is just the article suited to a new stomach; the child sucks it willingly, and, being slightly aperient, it acts on the infant's bowels, and carries off their dark, slimy contents, thus ob-viating all necessity for such abomina-tions as manna or castor oil. As the mother's milk seldom acquires its proper strength before the end of the second or third day, the infant's system is gradually prepared to receive and digest its proper aliment without inconvenience or trouble, a result that could not take place if rich milk were at once thrown into its delicate organization.

There is no part of a woman's duty to her child that a young mother should so soon make it her business to study as the voice of her infant and the language con-veyed in its cry. The study is neither hard nor difficult; a close attention to its tone, and the expression of the baby's features, are the two most important points demanding attention. The key to both the mother will find in her own heart, and the knowledge of her success in the comfort and smile of her infant. We have two reasons—both strong ones—for urging on mothers the imperative necessity of early making themselves acquainted with the nature and wants of their children. The FIRST, that when left to the entire responsibility of the baby, after the departure of the nurse, they may be able to undertake their new duties with infinitely more confidence than if left to their own resources and mother's instinct, without a clue to guide them through the mysteries of those calls that vibrate through every nerve of their nature. And SECONDLY, that she may be able to guard her child from the nefarious practices of unprincipled nurses, who, while calming the mother's mind with false statements as to the character of the baby's cries, rather than lose their rest, or devote that time which would remove the cause of suffering, administer behind the curtains those deadly narcotics, that, while stupifying nature into sleep, insure for themselves a night of many unbroken hours. Such nurses as have not the hardihood to dose their infant charges are often rife with other schemes to still that constant and reproachful cry. The most frequent means employed for this purpose is giving it something to suck (something easily hid from the mother), or, when that is impossible, under the plea of keeping it warm, the nurse covers it in her lap with a shawl, and, under this blind, surreptitiously inserts a finger between the parched lips that possibly moan for drink; and under this inhuman cheat and delusion the infant is pacified, till nature, baulked of its desires, drops into a troubled sleep. These are two of our reasons for impressing upon mothers the *early*, the *immediate* necessity of putting themselves, sympathetically, in communication with their child, by at once learning the new lesson as a delightful task.

Of the nurse and her ways we shall have occasion hereafter to speak more fully; but we cannot conclude this part of our subject without most strenuously warning all mothers on *no* account to allow the nurse to sleep with the baby after the first few days; never herself to lie down with it by her side for a night's rest; never to let it sleep in the parent's bed; and on no account keep it longer than absolutely necessary confined in an atmosphere breathed by many adults.

The amount of oxygen required by an infant is so large, and the quantity consumed by middle life and age, and the proportion of carbonic acid thrown off from both, so considerable, that an infant breathing the same air cannot possibly carry on its healthy existence while deriving its vitality from so corrupted a medium. This objection, always in force, is still more forcible at night-time, when doors and windows are closed, and amounts to a condition of poison when placed between two adults in sleep, and shut in by bed-curtains, and when, in addition to the impurities expired from the lungs, we remember, in quiescence and sleep, how large a portion of impurity is given off from the skin.

The crying of a child is often a vexed question between mother and nurse; the mother, in her natural anxiety, maintaining that the child *must* be ill to cause it to cry so much and so often; and the nurse insisting that *all* children cry, and that nothing is the matter with it, and that crying does children good, and is an especial benefit to infancy. The anxious and unfamiliar mother, though not convinced by these abstract sayings of the truth and wisdom of the explanation, takes both for granted, and, giving the nurse credit for more knowledge and experience on this head than she can have, resigns herself to the infliction as a thing necessary to be endured for the good of the baby.

As this is a subject on which we shall be expected to express a definite opinion, we must, in the first case, observe that the assertion of the nurse is, to a certain extent, perfectly true; but as she is generally unable to give a reason for a fact which she herself has probably received without explanation from some medical authority, we will endeavour to elucidate the matter for her.

It is quite evident that, for some considerable time after birth, the child's cry is more an effort subservient to the function of respiration, than a mere means of making known its wants. Nature has evidently endowed man with voice for more than the one purpose of aiding the organs of speech to enable him to communicate his ideas and express his wishes. Our belief is, that the Great Benefactor, in gifting man with voice, did *so that it* might act as a wakeful sentry over the lungs, as a sanitary guardian of that organ; that, when rendered feeble by disease or oppressed by affliction, the voice, either by the hilarity of singing, or by the sobs and sighs of weeping, might act as a means of expanding and stimulating their sluggish function, or, by the spasmodic pants accompanying grief, unload them when oppressed by anxiety. Hence we consider the voice or cry in childhood as a wise provision of Nature to enlarge and keep in health so vital an organization as that of the lungs. When the period of infancy has passed, and the child is able to make known its pains and pleasures by the new faculty of speech, crying, except for thwarted wishes, or suffering, ceases entirely, but only to be succeeded by a curiosity that prompts perpetual *talking*, alternating with shouts, laughter, and those extraordinary and involuntary guttural noises that children so frequently make in the exuberance of their animal spirits, but which we have no doubt they are urged to do from some instinctive motive of health.

We have already pointed out the evil of mothers allowing the infant, after the first few days, to sleep in the same bed with the nurse or herself. Besides the injury to its health by inhaling impure air, there is another danger to which the child is exposed, even worse, because more sudden than this—the danger of suffocation.

Many mothers, in the fullness of their maternal love, believe that in every condition of life there is no harbour of refuge, no sanctuary so safe as in their arms; and under this impression — and especially with their first,—seldom allow it to be absent from their embrace for an hour, taking their meals, performing domestic duties, and even sleeping with the baby in their arms; forgetting how the children's limbs are cramped, and their babes heated, by such close and warm confinement. But it is to guard against the possible risk of *overlaying*, and not to the inconvenience resulting from an excess of motherly affection, that we emphatically caution mothers to avoid the practice of letting their infants pass the night in their arms. Not only is it the custom to envelop the head and body in what is called the head-blanket, but for fear that with the night-clothes this should not be enough, the careful parent presses the face of her infant to her bosom for comfort, and finally closes up all access of air with the heavy bedclothes.

we to give a statistical account of
ber of infants who in Great Britain
ually *found dead* in their mothers'
e should produce an evidence
so mistaken a mode of nursing
would both astound and deter
from such an improper practice.
se advanced for the habit is by
s a valid one, for the infant can
be kept sufficiently warm in its
or crib by an extra blanket, and
weather by wrapping a bottle of
r in flannel, and placing it at the
he little bed.

er evil which springs from the
of the mother sleeping with her
the very grave one of allowing
l to suckle when the mother her-
leep. Nothing is more common
the mother to put the baby to
st the last thing, and then, pro-
erpowered by the day's fatigue,
s asleep,—the infant imbibing
deficient in those vital principles
e absence of mental energy, and
pathetic appeals of the child on
er, are so certain to induce in the
milk.

ature has entrusted the entire
n and well-being of the infant in
stage of life entirely to the
deriving its health and strength
r milk, she cannot be too careful
d against taking anything that
to interfere with her general
or indirectly act on the secretion
ilk. So susceptible is the mother's
during the period of her suckling,
icles which at another time could
with impunity will, in the course
ur, react with distressing violence
nfant: this is particularly the case
uits, vinegar, pickles, cucumbers,
acid or indigestible substances,
though in many instances not
the mother, act through her
ost immediately on the infant.

general rule, the mother, while
, should take as much exercise as
, avoid sedentary occupations, live
ight but nutritious dietary, abstain
l spirits or heating stimulants, and,
accustomed to its use, from wine.
t beverage she can possibly take
e a full and healthy secretion of
ale or porter, particularly the
or else a mixture of equal parts
and porter. Independent of its
ting effects on the constitution,
seems to exercise a specific effect
secretion of the milk, inducing a more steady and abundant supply of that fluid than any other substance, dietetic or medicinal. To keep her milk always in a state of health and richness, the mother must carefully guard against either a relaxed or a constipated state of the bowels. To correct the first, she should take a little chalk and ginger, or eat frequently of rice pudding, or boiled rice and milk; and to remove the latter, should a dose of magnesia and rhubarb not be sufficient for the purpose, a dessert-spoonful of lenitive electuary should be taken night and morning till the bowels act; or a few ounces of stewed prunes may be substituted at bedtime, for one or two nights. On all occasions she should avoid, if possible, taking irritating medicine, which will be certain to react through her milk on her infant.

The mother should never forget that the nine or twelve months she is suckling is a period of personal privation and penance—unless, indeed, she is willing to close her ears and her heart to the reproaching cries of her child. The number of times a child is to be suckled depends much upon the infant's strength of constitution, and on the quality of the mother's milk. As a general rule, once in three hours will be found—when child and mother are healthy — sufficient; indeed, the mother cannot too soon adopt a system with regard to the suckling of the infant—accustoming it to receive the breast at stated hours, and, if possible, never deviating from the plan she has laid down. Nothing is more exhausting to the parent, and hurtful to the child, than the practice adopted by some mothers of putting the infant to the breast on every occasion of its complaint or crying.

Next to the evil of indiscriminate feeding, and letting a child suckle when the mother is drowsy or asleep, is the impropriety of prolonging the period of suckling beyond the time which nature and common sense points out as the proper limit to that process. This is not the place to enter upon the reasons which generally induce women to procrastinate the process of lactation as long as possible; it will be sufficient if we state that the motive is a mistaken one, resulting too frequently in the very thing which is sought to be avoided. Nine months, and, with weakly children and strong parents, twelve months, is the full time that a child should be suckled. Nature has most wisely placed a sign in the child's mouth, the non-observance of which amounts to little less than a crime in the mother: that sign, and a most significant one it is, is the presence of its *teeth*. Every pang the mother feels when the infant's closing teeth fix in her nipple is a just penalty she pays for violating natural laws, and ignoring the age of her child. Nature has a purpose in all she does, and when she places teeth in the gums of an infant, it is a clear indication that it requires something more tenacious than milk for a food; in fact, that it wants, if not something to bite, a pabulum more stimulating than the soft curd of the mother's milk.

A prudent mother will, soon after her child has cut its first teeth, begin to accustom it to take something more solid than milk, so that, should any accidental illness befall herself, her infant may be in part prepared to digest and assimilate artificial food. The time at which this system of feeding should commence is about the seventh month; the best article to use for the purpose is Hard's Farinaceous Food, which should be given at first once, and after a time twice a day; and when the child has reached the ninth month, smooth bread and milk may be substituted. At or after the tenth month, — according to the number of teeth the child has cut, and the ease with which they have come through,—some crumbs of stale bread, finely grated, and a little boiled mutton, free from fat, minced very small, and mixed with a spoonful of the liquor in which the meat is boiled, so as to make the whole into a soft mass, will be found a very convenient and serviceable food. Of course it would be improper to give animal food, even in this limited quantity, oftener than once a day, till the child is old enough to exercise its limbs and body by crawling: under no circumstances, however, should animal food be given to children oftener than once a day; the quantity *may be enlarged*, but *not repeated*. If mothers were to pay more attention to this preparing process of feeding their infants, much of that distress and trouble, both to mother and child, experienced at weaning-time, would be avoided, while the health of the infant, which usually suffers at such periods, would be protected.

BRINGING UP BY HAND. — Many persons have an idea that when, from any cause, a mother is prevented from nursing her baby, and the little thing is debarred of its natural sustenance, its career is a sad, if not a hopeless one; and that, should it have the good fortune to survive the deprivation, it is doomed to an infancy of emaciation and sickness. No mistake was ever greater—no supposition more erroneous. Without impugning the value of the natural pabulum, or doubting the quality and sufficiency of the mother's milk, we are in a position, from a very large experience in such matters, to declare that the infant may be reared from the birth to robust childhood as well without the mother's milk—that is, artificially—as with it; our own conviction being that the child who is carefully reared by hand is less prone to infantile diseases, and has a greater chance of recovering from any illness that may assail it, than a child brought up on the breast.

There are two causes which lead to the necessity of rearing a child by hand. The first is the weakness of the mother, her physical debility preventing her from sustaining the exhausting process of suckling, and the parents being unable provide a wet nurse; the second, and far more frequent cause, is the want a nipple to the mother's bosom, or fro their being so far drawn in, that no nary means of mouth or pump can either one or both out. See NIPPLE.

If, from whatever cause, it is decid to bring up the infant by hand, a prop feeding bottle and teat should be once procured, and adjusted for See FEEDING BOTTLE. Or one of more modern vessels, such as is sho in the annexed cut, can be obtai and as soon as the child has been wa and dressed, the artificial nipple, prop warmed, placed in its mouth; the bo containing a small quantity of thin, made, and well-boiled gruel, the best pared oatmeal or grits being used for purpose, and boiled in a mixture of part of milk to three of water, whole being properly sweetened with best moist sugar. Care must be not to overload the young stomach allowing the child to suck too much one time: the amount of three or tablespoonfuls will be enough on occasion, repeating the same quan every two or three hours, as occa demands. This kind of food should continued for two or three days, or all the dark, feculent matter has discharged from the child's bowels. C however, should be taken that *fresh* f is given on every occasion to the inf

ccount permitting any remains of
er quantity to be warmed for use a
time.

FEEDING BOTTLE.

r the third day, the gruel may be
a trifle thicker, and an equal pro-
of milk and of water may be used
reparation.

he end of the first week, that kind
l should be adopted which it is in-
to persevere with.

this purpose, some medical men re-
nd biscuit-powder; some, soaked
inely beaten up; others, baked flour;
me, who prescribe by rule and not
erience, advise the use of arrow-
he *least* nutritious, and the *worst*
oods that can be given to a child.
ticle we are about to refer to is one
rough a long series of years we have
ith the most signal success, and,
uently, recommend with a confidence
n personal experience; that article
rd's Farinaceous Food," a prepara-
hich Dr. Pereira's analysis has
to be manufactured of the best and
wheat.

fficient quantity of the farinaceous
o last the infant for twenty-four
hould be made at one time; for this
e, a few spoonfuls are to be mixed
bout half a pint of the best skimmed
nd boiled for a sufficient time, care
taken first to make a smooth mix-
ith a part of the cold milk, like
which, when added to the remainder
fire, previously sweetened, is to be
constantly with a spoon; so that
oured into a basin, and left to cool,
hole shall have the consistency of
orridge. About ten minutes before
ld requires feeding, one or two teaspoonfuls of the firm food are to be cut out of the basin, placed in the baby's saucepan, and set on the hob till the heat softens it; sufficient milk is then to be added by degrees, the bowl of a spoon being used to mix the food and milk together till the whole is of the consistency of cream; it is then to be warmed to a proper heat, poured into the bottle, and the nipple, previously warmed, put in the child's mouth. At night, instead of the saucepan, the night lamp must be substituted. See NIGHT-LAMP.

If, on going to bed, the mother places the quantity requisite for the next feeding in the pan of the lamp, and lights her floating wick, or rushlight, the water in which the pan floats will (by the time the child wakes and requires it) have become hot, melting the food to a temperature that will, when the milk is added, be fit for the infant to take when poured into the bottle. As the child advances in age, it will daily require a larger supply of food, and also, in time, some of a still more nutritious quality; this is to be effected by adding an egg to each daily quantity of the food, the egg being beaten up with a little milk, and added while the whole is boiling. When the child has reached the eighth or ninth month, *two eggs* may be added to the daily allowance of food. It is hardly ever necessary to change from Hard's food when once commenced with, as it is found to suit children's stomachs better than any other variety of aliment used as a pabulum for infants; and if, as the child grows, and consumes more nutriment, and takes more exercise, the precaution is taken of increasing its strengthening properties by the addition of one or two eggs, the food so employed possesses every property that an aliment should contain.

Still it happens that certain constitutions require an occasional change, and are even benefited by going for a few days from a rich to a poorer food; or an aliment of the same quality, but of a different make. In such cases, Dr. Ridge's "Food for Infants," a very excellent article, which will be noticed under INVALIDS, may be substituted: this is to be prepared precisely in the same way as the former. The baked flour, when properly baked into a firm mass, of a uniform light-brown colour, and grated into a fine powder, also makes a very good food, and may at any time be used as a substitute. The common ship or captains' biscuits may be made into an admirable food for infants; they must, however, be first soaked in cold water for nearly a dozen hours, or till completely soft; then taken out of the water, put in a saucepan, covered, and placed on the fire, till the absorbed water in them is almost boiling; when they are to be beaten finely with a fork till a smooth, soft mass is formed; upon this the eggs, milk, and sugar, previously beaten together as for a custard, are to be poured into the saucepan, the whole well mixed, and boiled for a few minutes, emptied into a basin, and when cold, as much cut out at a time and made thin with milk as the child may require for each feeding. This makes a food, that for its nourishing and digestible properties we can recommend with absolute confidence; and as an alternative food with Hard's Farinaceous, is one of the best infant aliments that can be given.

Should it be necessary, from the state of the bowels, to give the child an aperient, a powder composed of

Grey powder . . .	2 grains
Jalap	2 grains
Scammony	1 grain

will be found amply sufficient for a child of twelve or fifteen months, or half of such a powder for an infant of six or eight months. A dessertspoonful of infusion of senna, sweetened, or a little manna dissolved in warm water, are also convenient and useful medicines for the same purpose. The chief consideration, in giving opening medicine to children, is to know what will effect the purpose without disturbing the stomach. For the relaxation that sometimes takes place, a few drops of tincture of kino—five, seven, or ten—in a little water and sugar, for infants under ten months, will be found the most effectual remedy.

INFANTILE DISEASES.—The period of infancy extends from the birth to the completion of the first dentition, or till the first set of what are called the milk teeth are cut, or have pierced through the gums. The tender, budding nature of the child at that time renders it particularly liable, and that on very slight provocation, to several diseases. The reason why infants are prone to so many complaints arises from the large proportion of the fluid over the solid parts of their bodies, the undeveloped state of those solids, the extreme delicacy of the skin, the great susceptibility of the nervous system, the extreme vascularity of the brain, the newness of all the organs to their functions, and the transitory state of every part of the *infant's body.*

Though the catalogue of diseases to which infants are liable is very lengthy, it is fortunate, both for the parents and the infants themselves, that only a comparative few of their number are actually attacked by the diseases appertaining to that period of existence called Infancy.

Some of these infantile diseases are born with the child, and are called congenital, and are either simple disfigurements of the person, such as moles, marks, blotches, or varicose states of the veins, known as *nævi*, or Mother's Marks, which see. Others are more serious, and amount to an actual deformity, such as hare-lip, and that cleft in the spine by which the spinal marrow is protruded into a bag or sac, *spina bifida;* distortion of the limbs, or a redundancy of certain members, as excess of fingers and toes, and other singularities, for which see MALFORMATION.

In infancy, the skin is the organ most generally affected, on the surface of which the characters or features of the affection are, as it were, photographed. Thus we have red and white gum, various kinds of partial or general eruptions, tetter, dandriff, *porrigo* or scabbed head, erysipelas, nettle-rash, sore ears, thrush, cow-pox, glass-pox, small-pox, measles, scarlet fever. The other diseases of infancy, not referable to any one particular organ, are water on the head, croup, hooping cough, rickets, worms, with fits and convulsions, which last two diseases most frequently proceed from Teething, under which head they will be found treated on. Of the other diseases named, several have already been given, the others will be found in their proper places.

Almost all the diseases and affections of infancy, whether resulting in an eruption or not, proceed from some unhealthy condition of the stomach and bowels, either caused by some impropriety of the food, an unhealthy state of the mother or nurse affecting the milk, or from the application of cold to the sensitive and absorbent skin. Whatever may have been the cause, all these affections are certain to produce either relaxation or confinement of the bowels, and as it is not always easy to discover the cause of the disease, and to remove it, the attention of the mother or medical man must be directed to counteract the result, by attention to the state of the bowels.

The number of times an infant's bowels should be opened daily in a state of health, depends much on the dietary and habit of body of the mother, and the activity or torpidity of the infant's own system.

When, however, the evacuations are copious, and exceed four a day, the parent should be on her guard to check a condition which, if carried further, might degenerate into looseness or diarrhœa; in the same manner, when the infant has only one evacuation in twenty-four hours, though it should be a copious action, care must be taken to avoid constipation, which would result if the action of the bowels should be delayed beyond that time.

The evacuations of the infant are sometimes of a thin, greenish colour, with a strong acid odour; at others, slimy and dark, or streaked with blood. In the former case the acidity should be carried off by a teaspoonful of syrup of senna or rhubarb, or by a small quantity of magnesia and rhubarb; in the latter, by the warm bath, and a little castor oil. For the clay-coloured motions, magnesia, rhubarb, and grey powder should be employed, and for the thin, dark green evacuation, resembling chopped spinach (sometimes the result of calomel), a little syrup of senna, and, if necessary, a powder of rhubarb, magnesia, and grey powder, is to be given. There is nothing that sooner acts on a child, or so rapidly exhausts its strength and emaciates its body, as a relaxation of the bowels; and there is no ailment of her child that a mother should sooner be on her guard to meet and correct by timely medicine or change of food.

We shall have occasion, when we come to MILK, to show the necessity there is for all suckling mothers to avoid fruits, cucumbers, vinegar, or any acid substance, on account of the milk becoming rapidly influenced by the diet: the mother should, before flying off for physic for her griped and irritated infant, attempt to correct the cause in herself, by a dose of soda and ginger, or magnesia, soda, and rhubarb, and, whenever practicable, attempt to physic her child through herself.

INFANTICIDE.—By this term is understood the voluntary murder of an infant, either during the progress of its birth, or as soon as, separated from the mother, it carries on life as a member of society. The medical jurisprudence on this crime in England is particularly full and searching, not only as respects the mother, but the victim. With regard to the woman, it must first be proved that she has been pregnant; that she has been lately delivered; that the child was hers; that she had an easy, or not very difficult labour: and as respects the infant, that it was a living child; that it did not die during the labour, and that the external marks of the body are not reconcilable with natural consequences. To prove each of these facts to the perfect confidence of a jury of twelve impartial men is often a matter of extreme difficulty, and, from the importance of the medical evidence to the accused, demands the most conscientious and deliberate investigation on the part of the medical man to whom the examination is entrusted.

In any case where the female has confessed her pregnancy, or has prepared some clothes, if only a nightcap, for her expected baby, the law will look with a tolerant eye even upon appearances and facts which, where perfect secresy has been observed, and no attempt at preparation made, would be construed as condemnatory evidences of the mother's conduct. It should never be forgotten that the infant may die during, or after the birth, without any criminality on the part of the mother, or even without her knowledge of what is taking place. In medical jurisprudence, the means by which a new-born infant may be deprived of life are divided between those which consist in omitting the necessary services required by the infant, and by inflicting violence. Appertaining to the first category are exposure of the naked body to cold or excessive heat, withholding the proper nourishment, allowing the child purposely to remain under the clothes of the mother, exposed to all the dangers of such a situation at such a time; and lastly, neglecting to tie the navel, or umbilical cord.

According to the law of Scotland, the earliest period at which the crime of infanticide can be sustained is from the time of quickening. In England, the period assigned by law dates from the seventh month, at which time the fœtus generally weighs five pounds, and is about fifteen inches in length. The following is Chaussier's scale of admeasurement. At full maternity—nine months—the navel is the exact centre of the fœtal body; at the eighth month it is two or three centimetres higher; at the seventh, the navel is still nearer the *sternum*, or breast bone; and at the sixth is exactly at the abdominal or inferior extremity of that bone. When this latter is the case, it may generally be considered that the child is under seven months, and, consequently, *not viable*, or capable of living as a separate individual.

There are several signs by which experienced surgeons can form an opinion, when shown the body of a dead infant, whether it has been born alive, or has died prior to the birth; the only reliable proofs, however, can be obtained by dissection. Of all these, the most important, and, except when decomposition has taken place, the most infallible, is derived from the state of the lungs. Before breathing, the lungs are flabby to the feel, of a pale whitish colour, and lie in a small compass in the thorax. If in this state they are taken from the body, and placed in water, they will SINK to the bottom of the vessel. If they have, on the other hand, been inflated with air, their colour is of a deep red, they fill the entire cavity of the chest, feel more spongy and elastic, and, when pressed between the fingers, or cut into, emit a crackling sound, or *crepitating* noise, and if placed in water, or any part of them, FLOAT in that fluid.

When a child has not breathed, the chest is always flatter than in those who have respired, while the body is more flabby. The diaphragm, or midriff, is arched upwards, and the *foramen ovale*, or aperture between the two sides of the heart, is open. The next question, after deciding whether the child was born dead or alive, which the surgeon is called upon to determine, is whether its death was induced by natural causes, or resulted from violence.

INFECTION.—The manner in which diseases are propagated, or conveyed by some effluvia, or noxious particles, given off by certain bodies, and through the agency of the air absorbed by the skin, or imbibed by the lungs, where, acting on the fluids of the system, they induce a diseased condition of the body. Infection may arise from a morbific agent emanating from persons affected with certain diseases, as typhus fever, small-pox, scarlet fever, plague, &c., or it may proceed from the noxious gases generated from decaying animal or vegetable matter, and from the miasmata of fens and marshes. See CONTAGION.

INFILTRATION.—A term used in surgery and the practice of physic when any fluid is effused into the cellular tissues of any part of the body, as in cases of internal hemorrhage, when the blood escapes from its vessel, and diffuses itself over the surrounding parts; when the pus from an abscess burrows extensively under the muscles; and when, as in dropsics, water or serum is effused in the cellular membrane of a part, or over the whole body.

INFLAMMABLE AIR, or PHLOGISTON.—An obsolete chemical name for hydrogen gas.

INFLAMMATION.—A peculiar condition of a part or the whole of the body, resulting, when it shows local characters, in redness, increased heat, pain, and sometimes swelling, and with an acceleration of the blood in proportion to the nature and situation of the inflammation. All inflammations are either general or local—general when they affect the system, as in fevers; local when the disease is circumscribed to an organ, as in inflammation of the liver, stomach, or lungs. Inflammations are further divided into the acute and chronic; or those in which the disease is present in all its virulence, and those where the disease is in such a passive state, that it does not materially interfere with the patient's ordinary avocations.

Medical men divide inflammations still further; such as into the healthy and unhealthy, the common and specific, the phlegmonous and the erysipelatous, and the gangrenous.

All inflammations terminate in one of three forms: *resolution*, — a gradual subsidence of the heat, redness, pain, and swelling, when present; in *suppuration*,—the formation of matter, or an abscess; and in *gangrene* and mortification.

There are few diseases to which the body is liable which may not, at some period of their course, assume an inflammatory state; in several of them, such a result being attended with very signal benefits.

The CAUSES of inflammation are extremely numerous, and, when the disease is general, often very obscure. The most frequent, however, are cold and wet, excessive fatigue, strong emotion acting on a debilitated frame, and the effects of accidents. When the disease is local, or confined to organs, it may be induced by draughts of cold water or large quantities of spirits, by drastic medicine or poisonous and acrid drugs, as in inflammations of the stomach and bowels, or of the kidneys and bladder.

SYMPTOMS.—When the inflammation is on the surface, as in cases of abscess, whitlow, or boil, the symptoms are great heat, swelling, redness, and acute pain, while according to the extent of the abscess, and the amount of suffering, will be the degree of constitutional disturbance

ıpathy. When the disease is
, however, there is languor, thirst,
ness, shivering, and heat of skin,
ıe, a dry, coated tongue, and a full,
ulse.

seat of inflammation is generally
to reside in the capillaries—those
vessels into which all arteries
te, and from which all veins take
e. See CAPILLARIES, and ARTERY,

theory of inflammation is, that in
ease there is a diminished action,
of power, of the capillaries, with an
d action or power of the heart and
, producing a dilated condition of
illaries, or an incapacity to propel
ntents; in other words, loss of
y in those delicate tubes.

this knowledge of the nature of
ase, it is evident that the TREAT-
resolves itself into lessening the
of the heart, and preventing so
quantity of blood being sent to
illaries; and increasing the elas-
or contractile power, of those
so as to enable them to propel
ntents into the veins. To effect
bjects, bleeding, either local or
, an effective action on the secre-
specially on the bowels and kidneys,
hs, with counter-irritation, embrace
ds of the constitutional treatment.
ugs most suited to produce these
are the saline salts, opium, calomel,
emetic, nitre, jalap, and digitalis.
de in which these agents are em-
will be found under the head of the
form of the disease.

mmation may attack any part or
re of the body, producing, however,
nt results, according to the different
involved by the disease. Thus,
it attacks the *serous* membrane,
s the pleura and peritoneum, the
mation takes an adhesive character,
g out serum or liquid albumen.
the *mucous* membrane is attacked,
flammation generally results in an
ed secretion of mucus, or pus.
the *cellular* tissue is the seat of the
, serum, coagulable lymph, or pus,
usual secretions, the abscess being
mmon termination of the disease.
fibrous tissue is involved, the termi-
is usually by gangrene; and if
ge and ligament are the parts
d, the termination is by ulceration.
nonous inflammation is that form
disease in which the cellular tissue
seat of the malady.

INFLAMMATION OF THE BRAIN.—This formidable disease, professionally known as *phrenitis*, or *encephalitis*—inflammation of the substance of the brain—may arise from such

CAUSES as exposure to excessive heat, sunstroke, intense or close study, violent emotions, from the *metastasis*, or moving of gout, or may be caused by severe attacks of measles or scarlet fever, and, among infants and children, from the irritation of teething, or the presence of worms in the bowels.

SYMPTOMS.—These commence with extreme anxiety, horror, tightness and oppression round the head, and throbbing of the temporal arteries; loss of memory, intense pain in the head, intolerance to light and sound, a wild, staring expression in the eyes, frightful dreams, great watchfulness, a flushed face, and an ungovernable delirium; the skin is hot and dry; the tongue, at first red, becomes white, and coated with various coloured furs, and the pulse hard, sharp, and quick. Besides these, there is often great irritability of the stomach, and frequently vomiting, while the bowels are often obstinately confined, and the urine scanty in quantity and high in colour. All these symptoms, and many others, are common equally to the disease known as inflammation of the substance of the brain, as well as to that of the lining membrane of the skull, or *meningitis*. In encephalitis, however, there is generally spasms of the muscles, starting of the tendons—*subsultus tendinum*—with cramps and rigid contraction of the limbs.

TREATMENT.—This should begin by a sudden and copious extraction of blood, either from the jugular vein, temporal artery, or from the arm; the quantity taken depending on the strength, habit, and age of the patient. Leeches and cupping-glasses, if necessary, are to be applied to the temples, or nape of the neck, and the circulation still further reduced by a vigorous action on the bowels, so as to prevent the coming on of vomiting. For this purpose, either the annexed powders or pills may be given, followed, in an hour after one or the other, by the draught prescribed below. Should it be necessary to repeat the dose, either a powder or two pills should be given, and followed in an hour by the same draught.

Take of—

Jalap powder . . .	1 drachm.
Cream of tartar . . .	2 drachms.
Calomel	15 grains.

Mix thoroughly, and divide into three powders: one for a dose when requisite.

Take of—

Compound colocynth pill	½ drachm.
Calomel	9 grains.
Croton oil	3 drops.

Mix into a mass, and divide into six pills: two to be taken for a dose when required.

Take of—

Epsom salts	6 drachms.
Carbonate of magnesia	1 drachm.
Peppermint water	3 ounces.

Mix in a mortar till the salts are dissolved, and make a draught; the whole to be taken an hour after the powder or two of the above pills.

The circulation having been lowered, and the bowels freely acted on, the following mixture should be employed for the double purpose of keeping down the action of the heart, and also to produce a moist and cooler state of the skin.

Take of—

Nitrate of potass	2 scruples.
Tartar emetic	3 grains.
Water	5½ ounces.
Tincture of digitalis	2 drachms.
Syrup of saffron	2 drachms.

Mix: one tablespoonful every two hours.

Concurrent with these remedies, counter-irritation is to be kept up by mustard poultices to the feet and inside of the thighs, or by mustard to the feet and blisters to the thighs, while powdered ice, lotions, or a stream of cold water, is applied to the head. As convalescence advances, blisters are to be applied either to the neck or the scalp, as occasion demands, the object being to prevent after consequences. Complete rest, the most perfect quiet, with the exclusion of all sounds and strong light, is to be rigidly enjoined, while barley water must, for some days, form the sole nourishment given. See HYDROCEPHALUS, or Water on the Brain.

INFLAMMATION OF THE LUNGS, or PNEUMONIA.—A disease of the substance of the organ.

The CAUSES of this variety of inflammation are a sanguineous and full habit of body, vicissitudes of temperature, violent exercise, exertions of the voice, and exposure to cold.

SYMPTOMS.—Pain in the chest and difficulty of breathing, cold chills, headache, thirst, and all the general symptoms of febrile action, attended with heat of the surface, particularly of the chest, great *debility, anxiety,* deep-seated pain, and a dry, hard cough; the tongue is furred, and the pulse quick and small, but very compressible. About the third or fourth day, a reddish, dull-coloured *sputum*, or expectoration, takes place, when the cough loses its hard, dry sound, and becomes loose and soft.

TREATMENT.—In the first stage of this disease, where there is much congestion, the treatment demands bleeding freely from the arm, repeating the operation, if necessary, in six or eight hours, and acting on the bowels by an effective purgative, such as the one prescribed below

Take of—

Calomel	6 grains.
Powdered jalap	10 grains.
Tartar emetic	½ grain.

Mix, and make a powder, to be given directly; to be followed up by one of the annexed powders every two hours.

Take of—

Nitre, powdered fine	2 scruples.
Calomel	15 grains.
Tartar emetic	2 grains.
Powdered squills	9 grains.

Mix thoroughly, and divide into six powders.

In the second stage, when there is danger of the lungs becoming *hepatised*, or rendered like liver in their appearance, leeches are to be placed on each side of the chest, or the cupping-glasses applied over the ribs on either side, with, if necessary, a mustard plaster as a counter-irritant over the chest, while the following powders are to be given every three or four hours, till the gums become affected.

Take of—

Kino, finely powdered	15 grains.
Powdered opium	3 grains.
Calomel	9 grains.

Mix completely, and divide into six powders.

If, however, there is much febrile action, the tartar emetic must be resumed with the calomel, in the proportion of a quarter of a grain of the first, and 2 grains of the latter, every two or three hours. If the symptoms assume a typhoid character, the stimulants necessary must be adopted, and ammonia, camphor, and lavender judiciously employed.

When the third stage, or that of suppuration, takes place, the strength is to be supported by ether, ammonia, camphor, and wine, or such cordial stimulants and tonics as the condition of the patient, and his age, justifies.

A strictly antiphlogistic dietary is to be observed during the treatment, and the

ıttentively watched against all
ɪrs of relapse, or the contact of
ɪxposure to dangerous agencies.
ɪd the preceding are diseases for
e attention of a medical man
ıbtained, it is unnecessary for us
t present more fully upon their
ies or treatment.

JENZA. — This extraordinary
hich for three hundred years has,
ıt periods, spread over Europe
emic virulence, derives its name
[talians, who believed that some
ent of an incomprehensible na-
ıt work, either in the atmosphere
ıan constitution, to produce such
ıd serious results, and that some
luence—or, as they termed it,
—was the cause of a malady
; only baffled the physicians of
ınth, but continues to perplex
the nineteenth century to dis-
intelligible theory for this sin-
ase.

ɪral features, influenza bears a
emblance to a severe attack of
rith this difference,—influenza
ttacks suddenly, and seldom
ı the same class of symptoms.
influenza generally occurs in
l autumn, it may take place at
of the year; it is, however,
ɪeceded by great vicissitudes of
r rapid changes from sharp cold
warmth. One of the most re-
characteristics of this disease
reme *debility* that in all cases

ɪPTOMS of influenza are mostly
ı severe cold, coming on with
ıd debility, cold chills and hot
eezing, running at the eyes and
ɪme soreness of the throat and
eeling as if the parts were raw,
or less oppression at the chest,
h, and a steady pain in the head,
confined to the forehead and
ıt other times situated on the
e head; the tongue is usually
l furred, the pulse small and
d easily compressed, and the
ı rapid and severe. The latter
and the settled pain in the head,
rs distinguish influenza from

ɪEATMENT of this disease, on
f its unknown pathology, has
varied than that of any other
When, in 1835, influenza spread
in with one of the most severe
which had been known for very many years, much of the mortality which attended that visitation was owing to the mistaken practice of the day, bleeding and depletion being considered the most rational and best means of subduing the disease,—medical men losing sight of the most significant symptom of the whole train, the great debility that always characterized influenza. Avoiding this signal error, the most sensible practice resolves itself into the two considerations of soothing the symptoms, and supporting the system. To effect these objects, the bowels should be gently acted on by a mild dose of castor oil, the throat and fauces protected, and a gentle perspiration on the skin excited, and finally the catarrhal symptoms relieved, by means of the following prescription. Take of—

Compound tragacanth powder	3 drachms.
Lump sugar	½ ounce.
Hot water	2 or 3 ounces.

Mix in a mortar, by pouring the water, by degrees, on the sugar and gum, till a smooth emulsion is made of the whole; then add—

Spirits of mindererus .	3 ounces.
Spirits of sweet nitre .	4 drachms.
Antimonial wine . .	6 drachms.
Paregoric elixir . . .	1 ounce.
Syrup of squills . . .	2 drachms.
Syrup of tolu . . .	6 drachms.
Camphor mixture . .	to make 12

ounces of the whole. Mix, and take two tablespoonfuls every three, four, or six hours, according to circumstances.

When the chest is much oppressed, and the cough troublesome, with the skin dry and hot, a poultice of mustard and flour may be applied for about twenty minutes, and a powder of 5 grains of Dover's powder, with 4 grains of antimonialis, should be taken at bedtime, the feet having been first plunged for a few seconds into hot water. The diet, without being exciting, should be light and nutritious. The pain in the head, the first and the last symptom, will not be affected by either diet or beverage. Care should be taken to protect the throat during convalescence, as the voice is apt to be affected for some time after the subsidence of the disease.

INFUNDIBULUM.—A funnel. A term applied by anatomists to a portion of the inner ear, and also to several funnel-shaped expansions of the Kidney, which see.

INFUSION.—A form of preparing medicines by soaking in water for a certain period of time. Infusions are either prepared with hot or cold water, but generally they are made with boiling water, in certain vessels called infusion-pots, furnished, like a teapot, with a strainer and a lid. The time an infusion should stand depends upon the nature of the substance to be infused, the usual time being from four to eight hours. All roots and barks require to be bruised before being subjected to infusion.

INGESTA.—Whatever is taken into the body in the form of aliment: the opposite of *egesta*, those substances expelled from the system.

INGUINAL.—Appertaining or belonging to the groin, or *inguen*. An anatomical term for a gland, ligament, and vessels in that neighbourhood; as the inguinal glands, I. region; and by surgeons the term is used to express a kind of rupture, called inguinal hernia. See Rupture.

INHALATION.—The process of drawing into the lungs the fumes and aroma of certain drugs and fluids, from an apparatus contrived for the purpose. See Consumption, *cut*. The substances generally used for this purpose are vinegar, camphor, benzoin, ether, and chloroform, the two latter being used as *anæsthetic* agents, to blunt the sense of pain, or produce insensibility, and are inhaled by an apparatus specially adapted for the purpose; the others are generally thrown into boiling water, and the watery fumes, charged with the medicaments employed, are inhaled through a tube.

INJECTION.—A fluid thrown into the body, either through the bowels, bladder, the ear, or into some tumour or abscess, after the contents have been discharged. Injections, when given for purgative purposes, are made of Glauber or Epsom salts, dissolved in water, to which castor oil is usually added; or they may be made by adding turpentine or assafœtida to warm gruel, and throwing it up the bowels by means of an apparatus called an enema syringe. The old name for injection was glyster, or clister; the term most generally used now for such an operation is *lavement*, or enema.

INNOMINATUS OS, or the Nameless Bone.—A term applied by anatomists to one half of the *pelvis*, a bone which in youth consists of three distinct parts,—the *os ilium*, or haunch bone; *os ischium*, or hip bone, and the *os pubis*, or share bone.—Arteria Innominata is the name applied to the first vessel given off from the arch of the *aorta*, which immediately divides into the right subclavian and right carotid, those vessels on the left side rising from the aorta in separate arteries.

INOCULATION.—Grafting. By this term is understood the operation of inserting under the cuticle any lymph, virus, or fluid, with the object of inducing a disease, which shall be milder than that form of it taken naturally by infection. The term was first professionally employed for the propagation of small-pox, and though among uninformed persons it is confused with vaccination, the term is strictly confined to inserting the virus of small-pox into a healthy body, an operation now rendered illegal, and punishable as a misdemeanour. See Vaccination.

INOSCULATION.—An anatomical term for the growing together of two opposite vessels, so that the fluid from one channel passes into that of the other. See Anastomosis.

INSANITY.—An unsound state of mind. See Madness.

INSPIRATION.—Inhaling, drawing in the breath, suspiration.

Inspiration and expiration constitute the function of Respiration, which see.

INSULATION.—Separating or detaching. A term used in medical electricity, and signifies placing the person to be operated upon apart from the attraction of the earth or surrounding objects, that the electricity passed into the body may remain in it till drawn off by the operator. This insulation is effected by placing the individual on a board or chair, supported by glass legs, or any other non-conducting agent.

INTEGUMENT.—The general cuticular covering of the body. See Skin.

INTERMITTENT FEVER.—A type of fever in which the disease has periodical remissions and exacerbations, the paroxysms recurring at regular and ascertained periods; such as Ague, which see.

INTESTINES.—The bowels—the whole of the alimentary canal, from the stomach to the anus. The intestines are composed of three coats,—an *external* or serous coat, borrowed from the *peritoneum*, or lining membrane of the abdomen; a *middle* or muscular coat, and an *internal* or mucous coat; the latter forming numerous loose folds, which, hanging down, act as a series of imperfect valves, presenting a considerable obstacle to the backward progress of the contents of the bowels, and at the same time affording a wider field for the diffusion of the lacteal vessels, whose mouths absorb the chyle still adhering to the feculent matter passing along. These folds are called *valvulæ conniventes*.

The intestines are divided into the large and small intestines, and differ in length according to the period of life of the person, being longer in infancy in proportion to the body than in after life. At adult age, the bowels are usually six times the length of the body.

The small intestines are divided into three parts,—the *duodenum*, sometimes called the "small stomach," from being the organ in which chylification takes place, and so named from being twelve fingers or inches long; the *jejunum*, so designated from being generally found empty; and the *ilium*, or the *small intestines proper*, constituting the largest portion of this half of the bowels.

The large intestines are also subdivided into three parts: the first portion, which joins the ilium, is called the *cæcum*, or the blind, so named because it has attached to it a process, or blind bag, *a cul-de-sac*, known to anatomists as the *caput cæcum coli*, or blind head of the *colon*, the most important portion of this division of the bowels, which, proceeding from the cæcum, ascends on the right side of the abdomen, till below the *diaphragm*, where it crosses to the left side, and then descends into the pelvis, receiving the names of the *ascending colon*, the *transverse* or arch of the colon, and the *descending* colon. Having reached the back of the pelvis, it makes a double curve, the *sigmoid flexure*, when it terminates in the *rectum*, or straight intestine, which at its terminal extremity, surrounded by cellular tissue and the *sphinctor* and *elevator* muscles, constitutes the *anus*, or fundament.

INTOLERANCE OF LIGHT AND SOUND.—A great repugnance to the slightest degree of light from sun or candle, or to any noise, especially sharp or sudden. These are symptoms experienced by patients in certain stages of fever, in delirium, and some other diseases.

INTUSSUSCEPTION.—A disease or natural accident of the bowels, caused by the falling into one bowel of a portion of the other above it. Thus a part of the ilium drops into the larger calibre of the cæcum and colon, causing a perfect stoppage in the bowels. The accident is a very serious one, and often proves fatal.

INVALID.—This term is applied to any person infirm, weak, or physically debilitated, whether the result of a long state of valetudinarianism, or the consequence of disease eventuating in that condition of mental and bodily prostration.

The stage between disease and health known as convalescence is a state in which the physician, after having extinguished in his patient the elements of the disease, by the scientific use of his drugs, often at the sacrifice of nearly the whole of his physical stamina, leaves him, sometimes without any advice or information, to recover his strength and vigour as time or accident may favour the result: medicine having prostrated his powers, he is left to food and patience to restore him to his pristine tone and vigour. On this account, a knowledge of what the invalid should take, and a clear understanding of the constituent parts of the different aliments, with an insight into their several fitnesses for his weakened organs, and the period each order of food takes to digest, with the number of hours that must elapse from the time of taking the aliment before the nutriment extracted from it can reach the heart, replenish the wasted blood, and react beneficially on the system; in other words, what the invalid should eat and drink, and what he should abstain from eating and drinking, is a subject of so much interest to the languid convalescent, that we propose to devote some space to the subject of the

Food of Invalids.—As we have stated under the head of Food, it is immaterial how large may be the amount of aliment taken into the body, or how rich or nutritious it may be, if the system cannot assimilate what it has received into the principles that finally constitute the bone and muscle, and the living fluids of the body. If this cannot be effected, the most dainty and luxurious meal ever eaten would be of no more account than a dish of boiled nettles or a plate of dry chestnuts; indeed, the latter would many times yield a larger amount of good chyle than the most savory viands. In health or sickness, it should always be borne in mind that the great end of eating is neither to pamper our taste nor gratify our appetite, but to replenish the system, by making up for the wear and tear of daily life by the formation of new solids and fluids; in other words, that the beef, pudding, bread, and potatoes, which make up a meal, may be converted into blood, from which the bone, the flesh, the skin, tears, and saliva, with all the fluids of the body, are afterwards to be secreted and laid down, and those make up for the constant waste taking place in every part of the body. Before, however, the food thus passing can become blood, they have to be disorganized, decomposed, and resolved into their proximate principles. To enable the several items taken into the body as food to undergo this change in the laboratory of the stomach, there are many circumstances absolutely necessary besides appetite and a tempting meal. The teeth and salivary glands should be healthy; the stomach must supply an abundance of effective gastric juice; the liver must send a due proportion of bile; the pancreas must yield its peculiar fluid; and, finally, there must be a healthy state of the lining membrane of the small intestines. As it is seldom, even in health, that all these conditions are found co-existing at the same time in one person, it is not to be expected that they will be present in an invalid; yet each and all of them are to be and *can* be induced by a steady attention to certain rules, and by leading the digestive powers up to a full performance of their duties, by a careful selection of food, and proceeding from light and easily digested articles up to the heavier and more tedious. Another fact, as necessary to the invalid as the man in health, is, that the amount of food taken should, by an adult, always be in proportion to the *waste* of the body, and not to its age or bulk; that is, to the labour performed, and the expenditure of strength and perspiration; and also that the *kind of food* should have reference to the *kind of labour*. The literary man, the artist, and those who work with their brains, naturally require a very different aliment from those who toil with their arms and legs, and expend physical power with every exertion.

Remarks.—No mistake is more universally committed than in the idea entertained of the quantity of food necessary to support the system and keep the body in health; and in the amount of animal food consumed this is particularly the case. Eight ounces of a mixed animal and vegetable aliment, well prepared, and properly put into the stomach, will yield a *larger* proportion of chyle, and afford *more benefit* to the body, than two pounds improperly taken: for in the first instance, every atom of the *ingesta* will be thoroughly [illegible], leaving but a very small amount [illegible] *egesta*; while in the second, the [illegible] will be imperfect, the proportion [illegible] small, and the sum of the egesta

To insure a proper digestion, the following rules should be strictly adhered to:—1st. The food must consist of a mixture of animal and vegetable substances, in the proportion of three parts of the latter to one of the former, as regards bulk; or if not all vegetable, three parts should be of an inferior quality to one of a richer article. 2nd. The food should be well divided by the incisor and canine teeth, before it is passed under the molar or mill-teeth, where it is to be first comminuted and then effectually ground into a smooth paste, and every particle charged with the saliva thrown out for the purpose. This process of mastication is one of the most important in both the functions of eating and digestion, for on the perfect manner in which it is performed depends the completeness of the digestion, and the abundance of the chyle produced. THIS IS A FACT OF PARAMOUNT IMPORTANCE TO THE INVALID. 3rd. Abundance of time should be taken over the meal, every mouthful being served with the same impartial care, and given an equal amount of mastication. 4th. While eating, the mind should never be diverted from the object before it, either by reading or by much conversation. However selfish or sensual this rule may appear, it must be borne in mind that the advice is for invalids chiefly, whose first duty is to endeavour to restore the healthy tone and perfect digestion of their stomachs: and, lastly, they should remain for some time—not less than an hour—perfectly passive, after their meal.

The reason why talking or reading is injurious during the time of taking food, and while digestion is going on, is, that a portion of the blood and nervous influence necessary for the perfect function of digestion would be diverted from the stomach, and sent to the brain to carry on the thought necessary to comprehend the book or paper, or maintain the thread of the conversation. We have already stated under Food (which see), that no person can live, or long preserve his health, on *one food*, however nutritious it may be; that the human stomach requires variety, and can extract as much nutriment from a few beans, or from an apple and a slice of bread, as from roast beef or mutton.

If there is, through a distaste for food by the invalid, a deficiency in the flow of saliva, the sense of smell should be stimulated at the mealtime by taking care that what is served for his repast emits a savory odour, when the salivary glands in the mouth are certain to be to some extent l, and will throw out an increased f that necessary solvent. If still, ar, there is too little to masticate al thoroughly, and the food taken y and ungrateful to the taste, a few the dinner beverage, whether malt weak wine, or spirits and water, be taken from time to time, to the food and facilitate the chewing allowing. This plan should always pted in preference of, at the end of al, pouring a quantity of cold liquid warm food, thereby not only ar- the digestion, but weakening the h, by distending it for a time with tity of liquid. The artificial mode g, which men of business and those bey the laws of fashion adopt, is njurious: the body, instead of being shed during its waking hours by qually divided meals, is directly ed by the abolition of two of its repasts; a breakfast and a dinner all that is thought necessary, or s time or convenience to take; the stomach and impoverished blood palliated by a biscuit and a glass , or any trifle that will answer the purpose of appeasing the stomach, t blunting its desire for dinner at ock.

lness is to act as a wholesome ad- on to the man, by teaching him s hurtful, and how to avoid the vil in future, the invalid should he period of his convalescence the n of turning over a new leaf in his s rules, and use it to lead his sto- ack to a natural mode of receiving gesting its food; for this purpose, ld divide his waking hours into four , to correspond to his breakfast, tea, and supper; so as to avoid, in cases of great exhaustion, the onable plan of lunch, or interme- portions of food.

ligestion is always slower when the s in repose or asleep, and as at such there is less expenditure physically entally, the stomach can go longer it replenishing at night than in the consequently food in the night, when valid wakes—unless in exceptional -should be avoided.

customary, in old age, to prescribe king of aliment at more frequent s than in youth or middle life; actice, however, whether the person ealth or a valetudinarian, is of infi- less consequence than a strict atten- o the *kind* of food given, more particularly as respects the quality of the animal texture employed.

Benedict tells Claudio, that "a man loves the meat in his youth he cannot endure in his age;" in the same manner, the system requires an aliment at one period of life unnecessary at another. The vigorous appetite of a boy can extract as much animalising matter from a handful of horsebeans as will supply nitrogen to the system for a whole day; the old man, with a sickly appetite and a defective organ, must look to something easier of digestion to give him the requisite azote, than raw pulse or the very best of vegetables. As his limbs want the warmth of the fleeciest flannel, so his stomach demands the stimulus of the most sustaining aliment. On this account the aged, as well as the very infirm invalid, should avoid chicken, rabbit, poultry of all kinds, and veal, as not sufficiently stimulating, and make their dinners off the meat of the full-grown animals—such as beef, mutton, venison, and game.

There is another point the invalid should remember, that *warmth* is an indispensable accessory to a healthy digestion, and he should never partake of food unless his extremities and trunk are of a genial temperature. The invalid should never lose sight of the seasons, and be careful not to consume the aliments most suited to frost and snow in the dog-days, or a spring food in autumn.

The stomach, as we have repeatedly observed, may be educated to digest anything, whether of the vegetable or the animal kingdom; and the invalid, impressed with this fact, should, if he has a prejudice against any particular food, and it is yet necessary for him to take it, make up his mind to overcome his antipathy, and learn to like it. This will be very easily effected if he has the courage to persevere, and adopts the precaution of beginning with a very small piece or quantity, and day by day taking a trifle more, till the mind and taste, reconciled to the objected article, at first tolerate, and eventually accept, if they do not always enjoy it. It is now a well-known fact, that vegetable food will yield for the benefit of the system as large an amount of nutrient matter as animal fibre; the only knowledge required being which to select, and which will yield at the same time carbon for the lungs and nitrogenous elements for the blood, or heat-forming and flesh-producing ingredients. The great objection to a vegetable dietary for invalids is the large quantity of it that must be taken to realize those results, and the consequent distension of the stomach with the flatulence that must result from such a strictly vegetarian dietary.

To recapitulate in a few lines the gist of these remarks,—

Let it be remembered, that as the body requires a vast number of opposite substances to insure its health, the food should be as various as possible, that it may yield them.

The time of abstinence should not exceed four hours from meal to meal.

The invalid, while his stomach is at all weak, must avoid veal, pork, smoked or salted meats, or whatever is hard in texture.

He must also abstain from beans and peas, and from new bread, as flatulent and hard of digestion.

And particularly he should remember, that the *best diet* is a mixture of animal and vegetable food, so varied as always to include the best suited as an aliment and the easiest of digestion; the whole being well masticated, slowly eaten, and thoroughly incorporated with the saliva.

ANIMAL FOOD, ITS PROPERTIES, DIGESTIBILITY, AND HOW BEST TO PREPARE IT.—The animal food on which man lives is as various as the vegetable, where, from grasses to fruits, nothing seems too hard or too rank for the function of his digestion and the assimilating powers of his system. Man's animal food is divided into,—1st, the flesh of quadrupeds or mammals, as that of the ox, sheep, pig, the deer, rabbit, and hare, with the young of each, as the calf, lamb, kid, and fawn; 2nd, the flesh of birds, of which there are three kinds,—the wild, domestic, and aquatic; 3rd, the flesh of fish, of which there are also three orders,—the salt-water, the fresh-water, and the shell-fish, including what is called the reptile class, the only animal belonging to which used in this country is the turtle; and finally, milk.

There are three important substances, which may be called proximate principles, extracted from all animal food, and upon which the integrity of the system depends; these animalizing or nitrogenous substances are *albumen*, *fibrine*, and *caseine*; there is also a fourth principle existing in all animal flesh, but not entering into the support of the system, though possessing nitrogen in a large proportion, namely, *gelatine*. Each of these articles performs a special duty or service in the animal economy. The *albumen* goes to form brain, nerve, and nervous influence; the *fibrine*, to constitute the flesh or muscle of the body; and the *gelatine* goes to form, in part, bone and tendon; while albumen and fibrine constitute the chief components of the blood. The invalid, according as his nervous, muscular, or circulating system is chiefly in fault, will, knowing that all animal fibre contains these principles, and some foods contain a much larger proportion of one substance than another, select the kind of aliment for his daily use which will yield to his body that principle of which his constitution stands most in need. Thus, if his nervous stamina has been impaired by long illness, *albumen* should form a large proportion of, and a frequent article with, his meals. Now, as the white of eggs is liquid albumen, and the yolk, besides soda, sulphur, and nitrogen, contains also a large portion of albumen, eggs, when lightly boiled, or beaten up with milk, form one of the best possible foods he can take to replenish his weakened brain and exhausted nervous system. As already said, the flesh of all animals contains a large proportion of albumen: the younger the animal, the larger the proportion; while in fish it forms a very considerable part of the whole. Upon the method of cooking, however, will depend the chance of the invalid deriving any albumen from his meat or not; for if the food is boiled or roasted too much, the albumen, for any practical good, will be as completely destroyed as if an egg has been over boiled, so as to render the white a hard, indigestible mass, no longer possessing albumen or nutritive properties: into a state precisely analogous the albumen in beef or mutton is converted by bad cooking, and the object of the invalid's care thereby entirely frustrated by the ignorance of the cook. There are other agents besides heat which coagulate albumen, and these the invalid should be acquainted with, or he may accidentally undo all the benefit derivable from a large supply of albumen taken into the stomach, and in the best of forms. The two most common agents effecting this are acids and alcohol: a glass of spirits, or of spirits and water, or a bitter infusion with a mineral acid, taken after an albuminous meal, will precipitate that substance in tough, leathery flakes in the stomach, rendering it quite as inefficacious as is the white of the egg boiled for a quarter of an hour. This action of alcohol on the albumen taken in daily aliment for the repair of brain and nerves, explains the whole *rationale* of that waste of mental energy and paralytic debility known as *delirium tremens;* every increment of albumen taken into the body is thus precipitated in useless flakes by the constant dram or the alcoholic potation, till the brain, cut off from all replenishment, preys upon itself; and the organ, injured in its structure, can no longer perform its function with integrity, and eventually degenerates into organic lesion, and, if unrelieved, induces confirmed *mania.* As the man with shattered nerves may restore tone to his nervous system by an albuminous diet, so may the drunkard be cured of his *delirium tremens* by a *careful* employment of stimulants, and a continued diet of lightly boiled mutton, eggs, such salt-water fish as whiting, haddock, and cod; and such albuminous vegetables as asparagus, cauliflower, and seakale; care being taken that the stimulant prescribed shall only be taken when the albumen has been absorbed into the blood, and is beyond the reach of injury by chemical decomposition.

As the cells of the nervous tissue are filled with albumen, so are the cells of the muscular filled with fibrine, the constituent element of all muscular fibre, as it is of the coagulable portion, or the clot of the blood.

The invalid who seeks to restore his wasted flesh, and recover the former bulk of his body, must look to fibrine to effect that result; and while taking the same care not to have his food over-cooked, will make his repast on flesh-producing aliments, that is, the fibrine of animal and vegetable substances. For the sake of distinction, vegetable fibrine, though exactly resembling animal in its chemical properties, is called *gluten.*

Now it is this fibrine in the one kingdom, and gluten in the other, that supply us with the principal materials of nutrition, and are the direct sources of our flesh and blood; and the man who wishes to increase the size of his wasted muscles will make them the staple of his daily diet. The vegetables which yield the best and largest amount of fibrine or gluten, are wheat, barley, oats, beans, peas, rye, and rice. The reason why pugilists are trained on beefsteaks, unleavened bread, biscuits, and ale, will be at once apparent, —healthy flesh and no fat are the results desired; the first being produced by the fibrine and gluten of the meat and bread, the starch and sugar of the malt liquor affording carbon for the lungs; while the little fat generated is kept under by hard exercise and sweating. Of caseine we shall speak under the head of MILK. The only other principle which remains to be noticed is that of gelatine, or animal jelly, the substance which, when any part of meat, particularly the head, feet, and sinews, is long boiled, leaves a liquid of such strength that on cooling it becomes a solid jelly. By this means of cooking, all the gelatine is boiled out of the meat, the mere dry, muscular fibre being left behind.

This jelly, because it was known to possess nitrogen, was supposed to contain the very essence of all the nutriment in the meat, and on this supposition was, for a long time, regarded as the best of all foods for the invalid and convalescent patient. So far was this delusion carried, that some years ago gelatine became a source of manufacture, and large quantities of this peculiar glue, only more daintily prepared, were vended in sheets, for the benefit, as it was supposed, of all weak and invalided stomachs; all the patient had to do being to pour a certain quantity of boiling water on the horny-looking substance to enable him to extemporize a basin of excellent soup, as both patient and physician for far too long a period fondly believed. Later and more ample investigation, however, has completely settled the question of its merits, and proved without a doubt, that though gelatine contains nitrogen, in no condition in which it can be given does it exercise *any nutritive effect on the system;* nay, that taken alone, unthickened by flour, crumbs of bread, biscuit powder, or Dr. Ridge's Food, it is *absolutely hurtful.* As albumen is the pith of the nervous tissue, fibrine of the muscular, so gelatine is the basis of all bone, ligament, and cartilage, and is precisely analogous to the article used in the arts, and known as glue, and generally prepared from the hoofs and sinews of animals.

The two great principles of nutrition in our animal food are albumen and fibrine; and in our vegetable, albumen and gluten; the other two—caseine and gelatine in the animal, and caseine and cellulose (analogous to gelatine) in the vegetable —are mere subordinates

As we have already shown, albumen goes to replenish the nervous as fibrine does the muscular system; yet in the blood, besides some salts and principles special to that fluid, both albumen and fibrine are united, and in nearly equal degrees; consequently, the blood is the most highly organized portion of the whole body. Hence it is that the juices of all animal textures we eat for food are among the most nutritious parts of our aliment, from the large proportion of albumen contained in them. There is no difference in the chemical composition of the ox or the sheep, or between the kid and the hare. All flesh is alike; the *flavour* alone is different, and that flavour resides in the juices of the animal. On account of the nutritive composition of the blood, it has lately been made a question, both of health and economy, whether we are not committing a grave error in bleeding our cattle to death before eating their flesh. The albumen and fibrine so lost, it is alleged, would add immensely to the flavour, quality, and benefit of the meat we consume; the blood wasted by slaughtering being as good, in every respect, as that left with the juices in the carcase. As a proof of the truth of this position, it is asserted that the flavour and goodness of game, which is not bled, depends upon the retention of its natural fluids.

From what we have now said the invalid will be able to decide, according to the special shape his debility or loss of power assumes, whether his dietary should consist chiefly of an albuminous class of foods, whether fibrine should predominate, or if his aliment should consist of both in equal proportions. He will also have been made acquainted with the fact that the same elements of nutrition common to animal food are to be found in certain vegetables, and will have surmised from thence that flesh, if necessary for certain conditions, though distasteful to the stomach, may be superseded by a vegetable possessing the same qualities—a supposition which we shall, farther on, show to be correct, by giving a list of such vegetables as may be substituted for animal substances. The invalid will also have discovered that the juices of meat contain a large proportion of the nutriment of the animal; that bad cookery destroys those juices, rendering the meat dry, unnutritive, and hurtful.

The relative digestibility of the different meats on which we live—in other words, the time that beef, mutton, &c., takes to be converted into nutriment; or from the time the roast or boiled fibre enters the stomach till it passes out digested, ready for the bile to separate the chyle from it—is a subject of so much consequence to the invalid, that for his instruction we append Dr. Beaumont's table, one of the most accurate ever published, every fact being certified by his own personal observation.*

		Time.	
Beef.			
Beef, with salt . . .	boiled	2h.	45m.
Beef, old salt junk . .	„	4	15
Beef, underdone. . .	roasted	3	0
Beef, lean	roasted dry	3	30
Beef, the same, with mustard .		3	30
Beef-steak.	broiled	3	0
Bullock's heart	fried	4	0
Beef-steak, lean.	„	4	0
Mutton.			
Mutton, fresh killed .	broiled	3	0
Mutton „ „ .	boiled	3	0
Mutton „ „ .	roasted	3	15
Lamb „ „ .	broiled	2	30
Pork.			
Pork, new, and just salted,	boiled	3	0
Pork „ „	stewed	3	0
Pork „ „	broiled	3	15
Pork-steaks	„	3	15
Pork, lately salted . .	fried	4	15
Pork, fat and lean . .	roasted	5	15
Sucking pig	broiled	2	15
Veal.			
Veal, fresh	broiled	4	0
Veal, fresh	fried	4	30

---

* As the reader may be curious to know the source of such a series of facts as the exact time various pieces of meat took to perform an unseen process, we must apprise him that Dr. Beaumont, an American physician of considerable scientific acquirements, was, about sixty years ago, called upon to attend a French Canadian—one St. Martin,—his patient labouring under an external abscess in the gastric region of the abdomen, but which eventually opened into the stomach, and defied all means of cure; so that after a considerable time, in which his health greatly suffered, a permanent fistulous opening remained, the aperture being sufficiently large for Dr. Beaumont not only to pass a small thermometer into the stomach, to test the natural temperature of the organ, but to enable him, with his naked eye, to witness the whole mystery of nature during the process of digestion.

After a time, St. Martin perfectly recovered his bodily health, but the fistulous opening never healed. Struck with the singularity of the case, the Doctor resolved to make use of his sometime patient as a subject for some living experiments. The result of those experiments was subsequently given to the profession in a series of tables, whose authenticity has stood the test of the most rigid investigation by some of the first men of science of the age.

		Time.	
Ox liver	broiled	2h.	30m.
Tripe, soused . . .	boiled	1	0
Sweetbread, calf's . .	broiled	1	15
Kidney	„	2	0
Venison-steak . . .	„	1	35

The first fact we obtain from analyzing this table is that *boiled* meats are the most quickly digested, and *fried* the most slowly; that between mutton and beef there is no perceptible difference in the time taken to digest; that *broiled* lamb is easier to digest than broiled mutton; that between salt pork boiled, stewed, and broiled, there is no difference from mutton or beef so treated. But when we come to fried salt pork, we find there is a whole hour more consumed in the process, that roast pork actually requires *five hours and a quarter* to digest; while sucking-pig is converted into chyme in two hours and a quarter, veal, however young, requires at least four hours. In tripe, sweetbread, kidney, and venison-steak, the invalid will find four dishes which, for ease of digestion, surpass all the other forms, while at the same time, three of them, at least, present him with dainty and nutritious sources of aliment.

Birds.

The fowls used as articles of food are ry numerous, and are usually divided to those having white and those having wn flesh; several of these, however, those known as the swimmers, are quite suited to an invalid's stomach. As a eral rule, the white-fleshed birds are, a food, less stimulating than most er meats, particularly those belonging the mammalia class, and, in some innces, are much more digestible. Those, vever, of the domestic order of poultry, account of their slowness of digestion, rather to be avoided than courted by invalid, especially if advanced in years, en the stomach both requires more mulating food and such as shall be ily converted into chyme.

To the convalescent of middle life, revering from some acute inflammatory er or other prostrating illness, poultry, ether broiled or stewed, makes a very itable dietary; and should his physician wedded to the delusion that there is tue in chicken broth, and prescribe it, e invalid may honestly make it so at y time by adding a good-sized tableoonful of Dr. Ridge's Prepared Food to ch pint of the watery liquid, boiling it to-ther for a few minutes, and eating it as he would an ordinary soup. By means of this excellent preparation for invalids, all the salts, juices, or albumen boiled out of the fowl will be incorporated with the gluten and caseine in the Prepared Food, and a quantity of highly nutritious aliment will be placed in the stomach, instead of an amount of hot liquid that otherwise can only distend the stomach, and lead to flatulence and pain. The following table, from the same source as the former, gives the relative time that the flesh of the different birds takes to digest in a healthy stomach.

Poultry.

		Time.	
Chicken .	stewed into soup	3h.	0m.
Chicken	fricasseed	2	45
Common fowl . . .	boiled	4	0
Common fowl . . .	roasted	4	0
Turkey	boiled	2	25
Turkey	roasted	2	30
Turkey, Wild . . .	„	2	18
Duck	„	4	0
Duck, Wild	„	4	30
Goose, Wild	„	2	30

This table shows us, that of the most familiar of the white-fleshed poultry, the wild and domestic turkey, boiled and roasted, are the easiest of digestion, only being surpassed in that respect by a venison-steak and tripe; that the common barn-door fowl takes nearly twice as long to digest as the turkey, and that the chicken, stewed for broth, requires three hours for the process. Pheasant, partridge, and pigeon hold a position nearly equal to the chicken, and when not too long kept, and simply dressed, without sauces, form a light and wholesome food for the invalid. Grouse, blackcock, woodcock and snipe, and hare, are each, if fresh, of great benefit to the convalescent or invalid, and being more stimulating than the white-fleshed birds, care must be taken that the flavour the epicure delights in while in health is in no way perceptible when offered to one whose stomach is only recovering its tone. After boiling, the simplest form in which any of the domestic birds can be prepared is by *broiling*.

Eggs naturally take a place immediately after poultry, and in these and milk the invalid will find a never-failing supply of all those elements which are necessary to the well-being of the body; and when the two are combined with the farinaceous food of Dr. Ridge, a series of custards and puddings will be obtained that, combined with a small amount of animal fibre, and some light vegetable, will yield a daily repast on which the most debilitated frame may, with care, be raised to robust health. Indeed, in cases where animal food cannot be taken, the invalid may be safely left to farinaceous preparations, with eggs and milk, differently made. Raw eggs, beaten up with tea or coffee, usually take an hour and a half to digest; when the eggs are roasted, two hours and a quarter; and when lightly boiled, three hours; and if fried,—the most objectionable way of cooking,—three hours and a half. Eggs should be very lightly boiled for an invalid, only sufficiently long to slightly coagulate the white, leaving the yolk liquid. After boiling, the next best plan is poaching. Though there is only half an hour's difference in the time of digesting a light and a hard cooked egg, the latter should always be avoided by the invalid. A couple of new-laid eggs, beaten up with milk, sugar, and a little coffee, will be found to make an excellent morning beverage, when taken with dry toast, on which a small amount of butter is spread. See MILK.

FISH.

Fish holds a most important place in the dietary scale of the sick man or convalescent. The white fish, as most of the salt-water fish are called, possesses the same general elements of nutrition as animal fibre, with a larger proportion of albumen, less or no fat, and a great excess of water, the proportion being,—

Albumen . .	14 parts.
Gelatine . .	6 parts.
Water . . .	80 parts, making 100.

The fish belonging to this category are the haddock, cod, plaice, flounder, sole, whiting, and turbot, and rank among the best as a nutritive food, and as substances easy of digestion. The red fish, as they are called, on account of the large amount of oil or fat they contain, are by no means suited to a delicate stomach, and should be, consequently, avoided by the invalid. Of such are the salmon, eel, herring, sprat, pilchard, the dace, and bream.

The only way in which an invalid should partake of fish is when boiled; in any other form it is injurious; and, when boiled, it should be cooked in as little water as possible—almost steamed, in fact, so that as much of the gelatinous liquor may be taken up with the flesh and bread as can be disposed of.

Of the shell-fish, every kind but the oyster should be carefully avoided, and these should be always eaten raw: even then, it takes two hours and fifty minutes to digest them, while cooked it requires three hours and a half. If, with only four hours intermission between breakfast and dinner, a lunch *should* be requisite for the invalid, it should consist of six or nine oysters, while, as a stimulant to a languid appetite, a few oysters taken twenty minutes before dinner will act as a tonic and stomachic, and prove superior to any bitter that can be taken. Though classed as a reptile, the turtle is the only other fish that can be recommended as an article of food uncommonly light, easy of digestion, and at the same time highly nutritious, and, if taken in moderation, will be found to afford the invalid decided benefit.

VEGETABLES.

Among this class of foods the foremost place must be given to what are called the grasses, or the cereal grains; and of these the most important are wheat, oats, barley, rice, and Indian corn, or maize.

The nutritive principles in all of them are the same, though differing in degree; these are albumen, starch, gluten, sugar, fatty matter, gum, earthy phosphates, and water, or the elements of combustion and nutrition combined—in other terms, supplying carbon for the lungs, to generate heat, and nitrogenous principles, to form flesh and bone. See FOOD.

Wheat, from containing the largest amount of fibrine, or gluten, is the grain on which we chiefly depend for sustenance and support, and is, directly or indirectly, that substance from which vermicelli, macaroni, and all the farinaceous foods —and particularly those we have so repeatedly recommended as a food for children and invalids — are prepared; those of Hard and Dr. Ridge being unquestionably the best, both for a solid food, and for puddings and custards. The ordinary articles sold under the general name of farinaceous preparations, such as sago, semolina, tapioca, &c., being deficient in gluten and nitrogenous principles, though making very good puddings for persons in health, are ill adapted to the invalid.

Though the other grains make nutritious food, the invalid should confine himself to the bread, biscuits, or puddings made from the best wheaten flour.

Next in importance to the cereals rank the legumines, or pulse family of plants,—peas, beans of all varieties, and lentils, which may often, with very great age, be substituted for wheaten d for animal fibre. The chemical uents of this order of vegetables rch, caseine, gum, albumen, sugar, e or gelatine, earthy phosphates, ater. The now popular article, as the Revalenta Arabica, owes f efficacy as an invalid's food to ge proportion of lentil powder, or al of peas and beans, which it s: on this account, because it es so many flesh-forming prin- we recommend the Revalenta as e or substitute for wheaten flour. ly useful as such vegetables as s, carrots, potatoes, onions, arti- and the family of the mosses are tant foods, few persons could live gth of time on any one of them; gh several contain a large amount h and sugar, their proportion of ous element is extremely small: e parsnip, turnip, and carrot only out *one per cent.* of flesh-forming l, while the boasted potato has o *per cent.* As a nutriment, of potatoes are only equal to f wheat. The *cruciferous* family s, embracing the cabbages, though in the nitrogenous element, have a proportion of albumen, that ome most valuable as a food; the er, seakale, and brocoli, with s, being especially beneficial as nt where an excess of albumen ed, and may be taken as a sub- r eggs or fish. A meal made of otatoes, a portion of brocoli or s, and a basin of the Revalenta would afford the system all the necessary for respiration and l for the formation of flesh, blood, , for at least one day.

llowing table shows the digesti- a few of the ordinary articles of food, and being copied from the . Martin's stomach, supplied by mont, may be fully relied on.

		Time.	
	boiled	1h.	30m.
	„	2	0
	„	2	0
	„	2	30
	„	2	30
	„	3	10
	roasted	2	30
	baked	2	30
sh wheaten		3	30
dian corn		3	15
Sponge cake	baked	2h.	30m.
Custard	„	2	45
Cake of Indian corn	„	3	0
Apples, raw, sour		2	50
Apples, raw, sweet		1	30

The drink which an invalid should take must very much depend upon his actual state of body at the time, and the nature of the illness from which he is recovering: generally he should abstain as much as possible from fluids, till his stomach, by careful husbandry, has been restored to some degree of tone. All mere fluids, in anything like quantity, are hurtful; the *stomach cannot digest liquids;* therefore, if there is anything in the liquid that might be beneficial to the system, either crumbs of stale bread or a spoonful of Dr. Ridge's Prepared Food should be first mixed with it, to absorb a portion of the bulk, so that the stomach may afterwards extract from the solid what the fluid contained. As a beverage for breakfast and tea, equal parts of milk and coffee, or the homœopathic cocoa, or cocoa-nibs, may be employed with advantage, varying either with tea (black tea in preference). For the dinner, a claret glass of the best mild ale, or twice the amount of stout, should be the quantity to begin with, and, indeed, the whole of that should not be put into the stomach at once. If malt liquor is objected to, the same amount of sherry and water, or weak brandy or whiskey and water, should be sipped at the meal, and the like quantity, with a biscuit, should constitute the supper; the meals at which the most solid substances should be taken being breakfast and dinner.

It is only necessary further to observe that the hours of nine, one, five, and nine should be those set aside for food, and that ten should be the time for the invalid to retire to rest.

Let him remember, that for the sake of obtaining the nutriment from what he eats, the food should be *lightly cooked;* that the best forms of doing so are by *boiling* and *broiling;* that *quantity* and *variety* are of more consequence than concentration and quality; that care in the selection of the foods fitting his physical wants, and punctuality in his meals and habits, are the surest ways of restoring health, and avoiding the necessity of having to take medicine of any kind. In conclusion, we recommend the invalid to bear in mind the many facts given in this article, and, if he wishes for a full guide to the restoration of his health, to make himself familiar with the articles—collateral guides—of Digestion and Food.

IODINE.—A simple substance found in a minute proportion as an integrant of all vegetable and animal formations, in salt water, sea-weed, sponge, and all varieties of vegetable life.

Chemical Properties and Preparations.—Iodine is so called from the violet colour of its scales and fumes; is a substance of a bright metallic lustre, in thin scales of a deep shining blue or purple colour, and of a strong, pungent, suffocating odour. Though procured from salt-water and marine plants generally, it is obtained chiefly and most abundantly from kelp. Iodine is soluble in alcohol, nearly *insoluble* in water, and is volatilized at a comparatively low heat, giving off a dense volume of intensely purple fumes; it unites with all the metals, forming salts known as *iodides*, and, with hydrogen and oxygen, forms an acid somewhat resembling chlorine. The most generally used preparations of iodine are the iodide of potassium, or iodide of potassium and iron; the syrup of iron and iodine; and the tincture (*tinctura iodini*).

Medical Properties and Dose.—Iodine acts on the system as a tonic, and a deobstruent of singular efficacy in all scrofulous tumours or glandular swellings, especially in those of the neck and throat, goitre, &c., and in all cases of a strumous habit of body. It has also been employed as an antidote in cases of poisoning with bruchia, strychnia, and veratria, but not always with satisfactory results. Iodine is either employed externally or internally; when used in the former manner, the iodine is mixed with cerate, either alone or combined with camphor, in the form of an ointment (see Goitre) or in a strong alcoholic solution, a preparation with which the part is to be painted once a day with a camel-hair pencil. When given internally, the iodide of potassium, or iodide of iron, are the salts usually employed, in which case they are administered in solution. The dose of either of the above salts is from 3 to 5 grains twice or three times a day. The dose of the tincture is from 3 to 7 drops, gradually increased, and given in some convenient vehicle three times a day; while for strumous children the best preparation is the compound syrup of iodine and iron, the dose of which is
from half a teaspoonful to one te
—according to the child's age—
hours. Starch forms a test fo
striking with it an intense blu
See Sponge, Burnt.

IPECACUANHA.—The na
South American plant, belongi
Natural order *Cinchonaceæ,* an
the most useful of all the articl
Materia Medica, both on accou
manifold actions on the system,
its powerful emetic properties.

IPECACUANHA.

Medical Properties and
tions.—Ipecacuanha acts as a
expectorant, diaphoretic, diur
purgative, according to the d
and the articles with which i
bined. The preparations of t
plant in general use are th
powder, the compound pow
Dover's Powder), the wine,
fusion, and the lozenges.

As an emetic, the dose of t
powder is from 10 to 20 grain
wine, from half an ounce to
repeated if necessary; and of the
from 1 to 2 ounces. For chi
dose of the wine is from hal
spoonful to a dessertspoonful,
in an hour if not effective.
phoretic, the adult dose of ipe
is from 10 to 15 grains of the

powder, or 8 grains of the simple powder, with 4 grains of antimonial powder; and of the wine, from 1 to 1½ drachms. As an expectorant, the dose of ipecacuanha is from half a grain to 1 grain every four hours of the simple powder, or two of the lozenges every four or five hours. As a diuretic, the dose is 1 grain of the simple powder, with 1 grain of powdered squills, 3 grains of calomel, and half a grain of opium, made into a draught, to be taken twice or three times a day.

The active property of ipecacuanha depends upon an alkaloid principle called *emetine*, 1 grain of which acts as a powerful emetic.

IRIS.—One of the membranes of the eye; an extremely delicate muscular tissue, which hangs like a curtain behind the aqueous humour, and in front of the crystalline lens, being perforated in the centre by a round opening called the PUPIL. The dark-coloured paint which is spread behind the iris, or on its posterior surface, gives the peculiar colour observable in the human eye, and the absence of which in the Albino imparts that pink hue to the iris which forms the distinguishing character of those people.

It is the remarkable susceptibility of his organ to the stimulus of light which uses the contraction and subsequent pansion of the membrane, or, as it is lled, the pupil of the eye. The iris is casionally liable to inflammation; when ch is the case, the disease receives the me of *iritis*. See EYE.

IRIS FLORENTINA. See ORRIS OT.

IRON.—*Ferrum*. This, one of the st common and universal of all the tals, is very largely used in medi e, both as a tonic and a stimulant, which latter respect it sometimes acts an emmenagogue, especially in chlo is. The preparations of this metal st frequently used are the sulphate *lphas ferri*), the rust or carbonate *rbonas ferri*), the scales or oxide *idum ferri*), the muriate (or *murias ri*), the wine (*vinum ferri*). Besides se, there are the citrate of iron, iodide iron, the tarturate of potass and iron, d some combinations with myrrh and es.

The precipitated carbonate of iron, or squioxide, may be given in half-drachm ses every six hours as a tonic; the dose the citrate of iron, for the same effect, 5 grains three times a day. The dose the tincture of the muriate of iron is from 10 to 30 drops, in some proper vehicle, every six hours; while the dose of the wine, chiefly used for children, is a teaspoonful every four hours, if over four years, and half that quantity for younger ages.

All the chalybeate springs of this country and the Continent owe their medicinal efficacy to the preponderance of iron they contain,—generally the carbonate or sesquioxide, in combination with sulphur. See MINERAL WATERS.

IRRITABILITY.—A term which, in reference to disease, is used to express a preternatural state of a part or of the whole system, as when, from any accident or disease, the natural function or duty of an organ or muscle is interfered with, and it becomes unduly excited—as in certain affections of the heart and stomach, —either organ performing its functions in an excessive or irregular manner. In such cases there is present some stimulus, which, acting on the muscular fibres, and through those fibres on the nerves, produces that irregular action which constitutes the condition known as irritability.

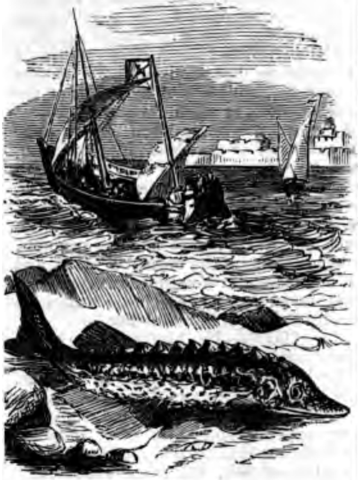
ISCHIUM.—The hip-bone; one of the three parts of the *os innominata*.

ISCHURIA.—A suppression of urine. See URINARY ORGANS, DISEASES OF.

ISINGLASS.—The gelatine of fish; a very superior species of glue, obtained from the air-bladder and sounds of many varieties of fish, but more particularly from the sturgeon.

The finest specimens of this splendid fish are caught in the waters of the Don and Volga, above 400,000 being annually cured on the north-western shores of the Caspian for the sake of the *caviare* made from the roes, and the isinglass from the sounds, of the sturgeon. So large and profitable was the manufacture of the isinglass, that the Russians for a long time kept the art of manufacture a profound secret. The sturgeon is sometimes caught about the mouth of the Thames; when such is the case, the fish captured are presented to the Lord Mayor, and by him forwarded to the Sovereign. The flesh of this fish is considered as the greatest dainty taken from the sea, and in its flavour can hardly be distinguished from veal.

The sounds are first steeped in lime-water, then laid flat, scraped, again further cleaned and purified, and finally bleached in the sun, then spread into sheets, doubled up like books of vellum, and by a fine planing-machine cut into the thin, hair-like filaments in which the best quality of isinglass is found in commerce. Besides being extensively used by wine merchants and brewers to fine their liquors, and employed to make a cement, it is largely used as a dietetic agent to make jellies, blancmange, and also as a food for invalids and children.



THE STURGEON.

ISSUE.—An artificial ulcer; a drain established by art, to keep up a free discharge from a certain place, in the hope of inducing a healthy action in the part beneath.

For the mode of preparing an issue, and the best form to apply one, see the article SETON.

ITCH.—A cutaneous eruption of the skin, caused by the presence of a minute parasitical insect under the cuticle, induced by a poor, dry food, conjoined with dirt and neglect. See SKIN, DISEASES OF THE.

ITER AD INFUNDIBULUM.—An anatomical name for a narrow passage from the ventricles of the brain to the *infundibulum*.

IVORY.—An animal substance forming the tusks or fangs of defence in the elephant, walrus, and some other animals, and consisting of a substance partaking of the property of bone and horn, and composed chemically of gelatine, phosphate of lime, and carbonate of zinc.

IVORY BLACK. — ***Ebur***
Animal charcoal; burnt bones
to powder; principally used
blacking.

IVY.—The *Hedera helix*.

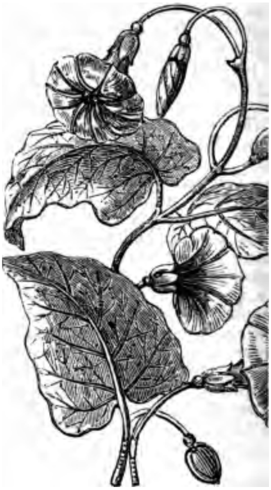
IVY, GROUND.—A commo
row plant, belonging to the Natu
***Labiatæ*, and vended in the str**
diaphoretic and antiscorbutic her

J

J is the tenth letter of the
language, and a modern additic
alphabet, though of very anc
being frequently used in abbr
for I.

JACKSON'S BATHING SP
A nostrum, once esteemed as
for rheumatism, and as a sti
embrocation, and supposed to
posed of an opodeldoc, with
juniper and rosemary.

JALAP.—This well-known dr
root of a Mexican plant belongi



JALAP.

Natural order *Convolvulaceæ*,
(*radix jalapæ*) being the only p
plant used medicinally.

MEDICAL PROPERTIES AND USES.—Jalap acts on the body as an aperient, and a mild or drastic purgative, according to the dose or form in which it is given. The active principle of jalap consists in an alkaloid called *jalapine*, the dose of which, as a drastic purgative, is from one-eighth to half a grain: the ordinary dose of the powdered jalap root is from 15 to 30 grains for an adult, and from 2 to 10 grains for children, according to their age. The extract, when given as a pill, requires from 5 to 8 grains for a dose, and the tincture from 2 to 4 drachms. Next to the simple powder, the best prescription is that of the compound powder, made by mixing one-third of powdered jalap with two-thirds of cream of tartar, and taking from half a drachm to 1 drachm for a dose.

JAMAICA PEPPER.—Another name for the Pimento, or Allspice, which see.

JAMES'S POWDER.—A nostrum of the once celebrated Dr. James, which was for many years regarded by medical men as the most valuable diaphoretic medicine in use in the practice of physic. Modern chemistry having, however, detected its components, and discovered it to be composed of a protoxide of antimony and phosphate of lime, a preparation was soon after added to the Pharmacopœia, under the name of the compound antimonial powder, or the *pulvis antimonialis*, which has been found to possess all the virtues of the Dr. James's Powder, the dose of which is from 3 to 6 grains, either alone, or in combination with calomel and ipecacuanha, as in the following prescription, when an effective sweating or diaphoretic powder for an adult will be obtained. Take of—

Compound, powdered, of antimony . . .	6 grains.
Calomel	3 grains.
Ipecacuanha	2 grains.

Mix: to be taken at bedtime.

JAPAN EARTH, EXTRACT OF CATECHU, or *Terra Japonica*.—The preparation kept in the shops under this name is a kind of earthy-looking extract, somewhat like treacle, consisting in chief of gum catechu, and used in half-drachm doses in cases of diarrhœa or other relaxed conditions of the bowels, combined with chalk and rhubarb.

JAUNDICE.—*Icterus*. The cause of this disease of the biliary organs is an obstruction to the flow of the bile from the gall-bladder, or the common biliary duct, into the duodenum, the chyme remaining consequently unchanged—in other words, not separated into chyle,—inducing the subsequent loss of physical power, from the absence of nutriment to the system, the loss of blood to the heart, and the absorption of bile into the circulation, tinging the skin and eyes of a yellow colour.

The CAUSES which induce this pressure or interruption to the flow of the bile are the presence of biliary calculi blocking up the ducts and channels of communication; diseased enlargement of the liver; pregnancy; a long and obstinate constipation of the bowels; tumours in the abdomen, and other sources of pressure.

The SYMPTOMS are nearly the same as those given under the head of "Bilious complaints," with acute pain over the region of the liver, nausea, vomiting, pain in the head, the colouring of the white of the eye *yellow*, a bitter metallic taste in the mouth, clay-coloured evacuations, and high-coloured urine; with a hot, dry skin, a quick, hard pulse; and a febrile state of the body.

The TREATMENT consists in first attempting to relieve the obstruction by the warm bath, the employment of warm emollient injections, such as a pint of thin gruel, with two ounces of castor oil and two drachms of turpentine; by hot fomentations to the stomach and liver; and, when the pain is excessive, by giving one of the following pills every three hours till the pain is subdued. Take of—

Powdered camphor . .	8 grains.
Opium, powdered . .	6 grains.
Calomel	18 grains.

Extract of hemlock . enough to make into a mass. Divide into six pills. Two tablespoonfuls of the mixture prescribed below are also to be given but between each dose of the pills. Take of—

Mucilage sufficient to incorporate

Castor oil	1 ounce.
Spirits of nitre . . .	½ ounce.
Tincture of henbane .	⅛ ounce.
Syrup	1 ounce.

Camphor water . . . enough to make a six-ounce mixture.

The bath and the injection are to be repeated, if necessary, in eight or ten hours, and when the evacuations begin to show an evidence of bile, 3 grains of grey powder, with 2 of rhubarb and 1 of ginger, should be given twice a day for a few days, and followed every third morning by a black draught, or else by a dose of castor oil.

The after treatment will demand great

attention to the state of the stomach, giving bitter tonics, such as infusion of gentian or colombo, with carbonate of potass, change of air, the use of the Bath or Cheltenham waters, and exercise. See Biliousness.

JESUITS' BARK.—The *Cinchona.* See Peruvian Bark.

JOINTS.—The articulations of the body, such as the knee, elbow, ankle, wrist, &c. See Articulation. The principal diseases of the joints are those of a surgical nature, such as dropsy of the articulations; scrofulous enlargement of the cartilages of the joint—sometimes called *White Swelling*, which see; inflammation and death of the extremities of the bones forming the joint, such as the *morbus coxarius;* and, lastly, a contraction and hardening of the ligaments, resulting in anchylosis, or a stiff joint.

JUJUBES.—A confection or lozenge used for hoarseness, sore throats, and colds. These elegant *pâtes* are made by dissolving isinglass, sugar, and gum arabic in water to a syrup, adding a few drops of the oil of neroleum, boiling the strained syrup to a proper consistency, then pouring the whole on a marble slab, rolling into a thin cake, and, when cold, stamping out the sheet into diamond-shaped lozenges.

JULEP.—A term used in medicine for any weak medicinal beverage or distilled water. Camphor water, the *mistura camphora* of the Pharmacopœia, is the only article to which the term is now generally applied, though when a mint or cinnamon julep is mentioned by an unprofessional person, spear-mint or cinnamon water are the articles implied.

The juleps in use in the United States are alcoholic drinks, made with brandy or some other spirit, and flavoured with some aromatic cordial.

JUNIPER.—A genus of plants common to most parts of Europe, while some varieties are natives of Syria and Northern Africa: the whole genus belongs to the Natural order *Coniferæ.* The European variety, or *Juniperus communis*, yields a berry containing a large amount of an aromatic pungent essential oil, which, as a medicine, acts as a diuretic, stimulant, and diaphoretic. As an external application, the oil is sometimes used in conjunction with oil and turpentine for sprains. Internally it makes an excellent diuretic when dissolved in alcohol, and from 1 to 2 drachms of the spirit taken for a dose in water or gruel, or combined with a mix[illegible]. The principal use that is made of the juniper, is to give flavour to the spirits known as geneva or gin.

The resins known as olibanum, frankincense, and sandarac, are the product of varieties of the juniper tree.

K

K, the eleventh letter of the alphabet, and, as a numeral, stands for 250, and with a dash above it, $\bar{K}$, for 250,000.

KALE, SEA.—A colewort, or species of sea cabbage, now largely cultivated as a delicate and nutritious dainty for the table, and being in season in the spring, is used as a substitute for asparagus, which, in taste and properties, it somewhat resembles.

KALI.—An old chemical name for the impure carbonate of potass, obtained by the lixivication of the ashes of wood fires with water, straining the liquor, boiling, and then crystallizing the residuum. See Potass.

KELP.—The ashes of marine plants, from which we obtain the common carbonate of soda and the valuable drug called iodine. The ashes of burnt seaweed, or kelp, are used in the manufacture of glass, and in the formation of soap; the best quality of this saline ash is called barilla. See Soda.

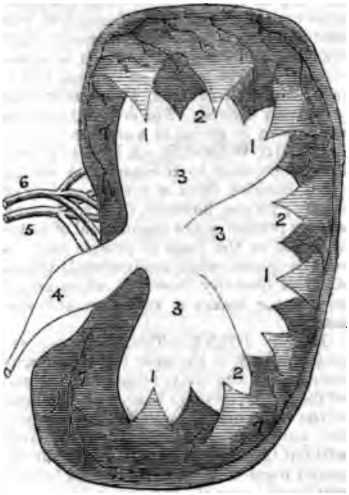
KERMES' MINERAL.—An old chemical name for the red sulphuret of antimony.

KETCHUP.—A condiment and sauce obtained from the mushroom by the addition of salt and spices, and by boiling off the excess of water. An inferior ketchup is made from the pericarp or outer rind of the walnut, and other vegetable substances, and also from oysters.

KIDNEYS.—These organs are situated one on each side of the lumbar region of the abdomen, and are surrounded by a capsule and a mass of fatty cellular tissue. A branch called the renal artery, running right and left from the descending aorta, supplies each kidney with nutrition, while the renal vein carries the refuse blood of the organ to the hepatic region.

The structure of the kidney is very peculiar, and unlike any other gland in the body; and when divided vertically, is found to consist of two structures, the external, or *cortical*, consisting almost entirely of the minute ramifications of the subdivided branches of the renal artery;

internal, or *tubular* portion, ar-
n bundles of delicate fibres,
a pyramidal form; each bundle
s basis in the cortical portion, and
erminating in a minute point or
nd opening into a cavity called a
This inner or tubular portion is
l of a congeries of very small
tubes, which on all sides con-
form the papillæ. The chalices
, cup-like cavities formed in the
rgin of the external or cortical
f the kidneys, the whole being
h a delicate fibrous membrane,
every third chalice, sends down
ntre of the organ a process or
partition, giving the enclosed
e appearance of a funnel, and
alled *infundibulum*. As there
chalices in each kidney, there are,
ntly, three funnels or *infundibula*,
ar the middle of the concave part
rgan, converge and unite into
alled the *pelvis*, or basin of the
This fibrous bag, or pelvis, almost
ely contracts, terminating in a
e, the ureter, which, quitting
y, runs down through the abdo-
the cavity of the pelvis or hips,
vered by the bowels, it finally
he under and posterior part of
er, which it pierces a few inches
fellow of the opposite side, in
natomically known as the *trigon*.
nction of the kidneys is to sepa-
the blood the excess of all the
ents taken into the system by
nt and beverages; or, in other
o secrete the urine. This is
y the minute subdivision of the
anches into which the renal
vides, and the diffusion of their
among the cortical portion of
ey; from these extremely fine
arise the capillary vessels, which,
themselves into cones, receive
e of the tubular portion. The
parated from the blood in the
teries of the cortex, or outer part,
ed by the capillary tubes, and
from each cone, drop by drop,
the papillæ into the chalices; the
n turn blend their contents into
ndibulum; the three infundibula
urn pour their collection into the
the kidney; and the pelvis, ter-
in the ureter, finally carries the
o the bladder.
he better illustration of this
g subject, we have appended a
ection of the kidney, copied from a drawing made from the *subject* by the editor when a student.



VERTICAL SECTION OF THE KIDNEY.

1, 1, 1. Tubular structure terminating in the Papillæ. 2, 2, 2. The Chalices into which the Papillæ terminate. 3, 3, 3. The three Infundibula, or funnels, which unite to form, 4, the Pelvis, and its continuation, the Ureter. 5. The Renal Artery. 6. The Renal Vein. 7. The Cortical substance of the organ, in which the Artery ramifies.

KING'S EVIL.—A term applied to any severe scrofulous condition of the body, and for which, in the monkish days of superstition, the touch of the sovereign's hand was thought to be the only valid cure. Edward the Confessor, in the eleventh century, was the first monarch who touched, as it was called, for the Evil; and George the First, at the beginning of the eighteenth, the last king who attempted it. Dr. Johnson, when a boy, was touched for the evil by Queen Anne. See SCROFULA.

KINO.—A resinous extract obtained from the Indian tree, the *Pterocarpus marsupium*, a plant belonging to the Natural order *Leguminoseæ*.

MEDICAL PROPERTIES AND USES.—Kino is obtained in small particles, extremely brittle, and having a shining appearance, of a dark purplish colour, and acts as a powerful astringent, and in some respects as a styptic. Kino is chiefly employed in diarrhœa, bowel complaints, and hemorrhage; and, externally, to check the bleeding of small vessels. The preparations are the tincture (*tinctura kino*), the dose of which is from half a drachm to 2 drachms, and the powder, which is sometimes given with opium in internal bleedings; and with calomel, where salivation is speedily desired. The dose of the powder is from 10 grains to a scruple.

KIRCH-WASSER.—A kind of cherry brandy peculiar to Germany. A strong spirit distilled from a certain variety of cherry; its use, however, from containing a large portion of the essential oil of bitter almonds, or the basis of prussic acid, is very dangerous when inadvertently taken. A small quantity, however, when mixed with water, makes a very agreeable stomachic.

KNEE JOINT.—This, the most exposed and one of the most important articulations of the body, consists of the end of the *femur*, or thigh bone, with the head of the *tibia*, and the *patella*, or knee-pan, the only protection the joint has from without, the whole articulation being firmly bound together by cartilages, and lateral, transverse, crucial, and other ligaments, further strengthened by the tendons of the muscles of the leg and thigh inserted into the bones around the joint.

KOUMISS.—An intoxicating beverage made from fermenting mares' milk; the ordinary beverage of the Tartars. See MILK.

KOUPO.—The flowers of a rosaceous tree, used as an anthelmintic. See WORMS.

L

L, the twelfth letter of the English alphabet. As an abbreviation, L stands for *libra*, lb.; and as a numeral, stands for 50, and with a dash above it ($\overline{\text{L}}$), for 50,000.

LABDANUM.—A Canadian resin of a black colour, the product of a species of the *Cystus*. The resin is used for making a plaster with wax, &c.

LABIA.—The lips. A term applied by anatomists to more than one part of the human body.

LABOUR, OR CHILDBIRTH.—The great importance of this subject necessitates our entering at some length on the different matters involved in the important operation of nature that forms the theme before us. Most practical surgeons divide labours into four orders,—*natural*, *tedious*, *preternatural*, and *complex*; and though we purpose to confine our remarks to the first, it is necessary that we should state the characteristics of each.

A natural labour is one in which the child presents naturally for the birth, and the labour is begun and concluded in the space of *twenty-four hours*. Tedious labours are those in which the presentation is still natural, but from some irregularity in the action of the womb, the delivery is extended over the twenty-four hours, being sometimes delayed for seventy-two hours. Preternatural labour: this order implies an unnatural presentation,—that is, any part of the child above or below the *funis*, or navel-cord, presenting, except the head. Complex labours are those where the birth is complicated with hemorrhage, or separation of the *placenta*, or afterbirth; by the presentation of a foot or a hand, or, in the case of twins, two hands or two feet, and a few other peculiarities.

NATURAL LABOUR is divided into three stages; the *first stage* embraces the period from the first pains, or from the commencement of the contraction of the womb, to the complete dilatation of its mouth, or outlet,—a process that may extend from four to twelve hours. The *second stage* extends from the complete opening of the womb to the birth or expulsion of the child, and may extend from half an hour to twelve or more hours; and the *third stage* is comprised in the time from the birth of the child to the expulsion of the afterbirth and membranes, and the complete contraction of the womb, generally occupying about half an hour.

Most women strive to keep about till the last, and seldom, unless fantastical, wish to have the surgeon about them till his services are likely to be of use; and most women, particularly those who have had children, can always tell when that time has arrived, both by their feelings and by certain signs denominated ***shows***; and as some females have a very rapid time, the whole three stages being often completed in less than an hour, the medical man should always be sent for directly that local demonstration is made.

The surgeon, if he is a man of any experience, will be able to form a shrewd guess of how the labour is progressing by watching his patient's face, paying attention to the tone of her voice, and by noticing whether the abdominal tumour is high

down. When it is necessary to
xamination, it should be per-
nderly and expeditiously; the
ing previously placed on her left
d, and covered by the counter-
is quite unnecessary for her to
for good till such time as her
siders it prudent. The object
examination is to ascertain that
to satisfy himself on three im-
atters,—first, is it a natural pre-
in other words, is the *head*
, and if so, is it presenting
n such a manner that the *occi-*
ck of the head, shall be to the
the face to the sacrum? Secondly,
uth of the womb open, are its
dilatable, and moist, or are they
kered, dry, and unyielding? and
the passages relaxed and moist?
points are all favourable, the
y be prognosticated as likely to
expeditious: the patient should
to get up and walk about the
ong—with occasional rests—as
holding by the bedpost every
n comes on, the surgeon avoid-
necessary examinations, till the
he pains and their close sequence
ence that the time for his pro-
id is approaching.

hat time has arrived, the woman
ut to bed, placed as before, on
de, with her knees drawn closely
stomach; the side of the sheet
uilt should be pinned together
places, so that the hand can be
passed beneath the clothes, when
on, seated in a chair, with his
e foot of the bed, places himself
ess for his duty. As the womb
with the pain, it forces the child's
e mouth of the organ; the head,
ession of rotatory, drill-like mo-
dually expanding the opening,
membranous bag in which the
ts in the *aqua amni* begins to
through the aperture; this is
that great care is necessary on
f the surgeon not prematurely
e the membranes, till both head
brane have answered their pur-
of drilling open the mouth of
; nature always effecting that
the proper time. Immediately
breaking of the water, as the
f the membranes is called, the
ving now greater space, contracts
ble power, and by one or two
ten forces the head clear from the
nd a considerable way into the
vagina, from whence, after a temporary rest, and sometimes brief snatches of sleep by the patient, the head is brought almost to the birth, the *perinæum* being at each expulsive pain stretched like the head of a drum. This is the most critical period of the whole labour, and demands the greatest vigilance and care on the part of the surgeon to be ready to support with the palm of his hand the *perinæum*, and prevent the too rapid exit of the head. The last and most severe pain is that which expels the head, after which there is a brief intermission, but not of suffering, till another contraction delivers the shoulders: the body and limbs the surgeon, by a lateral motion, removing with both his hands.

With the cry of the child, the exhausted mother forgets all her pains, and it should be the surgeon's duty to take care that she shall have that gratification *instantly*, by observing that nothing gets before the child's mouth, and that by raising the clothes he affords it abundance of air. If the cry is feeble, the mouth and nostrils are to be instantly cleansed from any mucus or froth that may clog them, and the spine rubbed vigorously with the fingers of the right hand. If the child is still mute, or partially so, a basin of warm water is to be placed in the bed, and the infant immersed up to the throat in the bath thus provided, and those means adopted for suspended animation already described under ASPHYXIA, and ADVICE TO MOTHERS.

After the child has cried freely for a few minutes, the navel cord is to be tied by a ligature about an inch and a half from the body, by means of the strings which, before the rupture of the membranes, the surgeon should have placed in readiness, and which are made by doubling two half yards of the unbleached thread, and knotting each together, so as to make two strings of a quarter of a yard long. See ADVICE TO MOTHERS. Having tied the cord next the child, he should then place the other ligature about two inches above the first, and with the scissors divide the cord near the first, or between the two knots; the child is then to be loosely folded in a blanket, and placed near the mother till the labour is completed. If, after waiting for *ten minutes*, there should be no succeeding pain, the surgeon should lay his hand on the abdomen, and, grasping the loose integuments, employ both friction and pressure, but gently, to cause the contraction of the womb, that the afterbirth may be expelled. Should this not succeed in inducing a pain, the hand should be dipped in cold water, and again applied to the abdomen. If after *fifteen minutes* from the birth the placenta is not expelled, the cut cord is to be taken in the left hand, and the right, guided by the cord, is to be passed gently upwards, and, with tenderness and care, the afterbirth, finally encompassed by the hand, is to be brought away. As soon as this is effected, and the womb has contracted, a broad binder, girth, or bandage, about eighteen inches wide, is to be passed smoothly round the woman's body, and tied or pinned in several places, tightly over the abdomen. A warm napkin is next to be applied, the patient well covered with extra clothes, a draught with the *sixth* of a grain of morphia, or 25 drops of laudanum, given, and the patient allowed to remain undisturbed for *at least two hours*.

Sometimes, at the commencement, it happens that the woman is disturbed with small exhausting pains, that keep her occasionally for hours, and sometimes even for days, in a state of irritation and suffering, without producing any effect upon the womb, or advancing the labour in the slightest degree; in fact, only breaking up the patient's strength, and rendering her tetchy and desponding. Examination will discover, in all probability, that the mouth of the uterus is only so far open as to admit the point of the finger; that the lips are rigid, extremely sensitive and dry. An examination of the woman's face during the progress of one of these abortive pains will show the surgeon that the womb is contracting irregularly, and in such a manner that, without closing on the child, and forcing it on the opening, they only cause griping, crampy pains, that do no earthly good, and merely exhaust and weary the patient. In such a case, the duty of the surgeon is to suspend such fugitive or false pains, and give the woman as much rest as possible till the coming on of the true labour. For this purpose the following draught should be given; the patient put to bed, hot water applied to her feet, and a warm napkin laid across the abdomen.

Take of—

Spirits of mindererus .	6 drachms.
Spirits of sweet nitre .	1 drachm.
Ipecacuanha wine . .	½ drachm.
Syrup of saffron . . .	1 drachm.
Laudanum	30 drops;
Or, Acetate of morphia .	¼ grain.
Camphor water . . .	enough to make 1½ ounces.

Mix: to be given directly.

When the patient rouses from the sleep which is certain to follow the abeyance of the pains, it is possible labour will commence in earnest. The surgeon, however, will have satisfied himself, before giving the sedative draught described above, on two of the most important facts connected with the whole labour—the condition of the bowels, and the state of the bladder, for if either are distended, the operations of nature, however forcible and rightly directed, will be delayed for hours. If, then, these should require relieving, they should be emptied directly in all cases; and in such a condition as we have been describing, even before giving the draught. Napkins wrung out of hot water, and applied to the pubic region, or a bottle of hot water, enveloped in flannel, applied to the part, will generally excite the bladder to act, without resorting to the catheter; while an enema of warm gruel is often quite sufficient to empty the large bowel, the rectum.

Though nature generally throws out sufficient exudation to keep the passages moist, when the labour is very protracted these always become dry and hot, and then require to be often and freely lubricated with lard, or some kind of a firm pomatum, a quantity of which will always form an accompaniment to the baby-basket.

In cases where the patient is nervous, weak, and the period of even a natural labour would exhaust her strength, or where either convulsions or hemorrhage is to be feared, or should one or the other have set in, it becomes the surgeon's duty to *expedite* the labour as much as possible. To effect this purpose, he must give her the *secale*, or ergot of rye,—a drug which possesses the singular property of acting, within ten or twenty minutes, directly on the womb, causing it to contract and expel its contents. There are certain conditions, however, that must previously exist before the secale—except in special cases—can, or ought to be given. These conditions are,—*The womb must be well open, the lips thin and dilatable, the child presenting naturally, the passages relaxed, and no malformation of the pelvis existing.*

To prepare the secale.—Bruise 2 drachms of secale, and boil it slowly, with about 20 grains of carbonate of soda, in 4 ounces—a quartern—of water, for ten minutes; strain the liquid, and to half a teacupful add enough sugar to sweeten, and a tablespoonful of gin, and give the vessel to the patient to drink off the hot draught as she would a cup of coffee. In a few minutes, the stronger and more expulsive action of the womb will show that the draught has taken effect.

When hemorrhage attends the labour the secale must be given directly; and should it follow the expulsion of the afterbirth—which, till the womb closes, there is always fear of,—cold water must be poured on the abdomen to promote contraction; or cloths, soaked in cold lotions, applied across the stomach, while the patient's strength is supported by brandy, ammonia, and ether, and the feet kept hot with heated bricks.

The most important means, however, is the *plug*, or stopping up of the passage, as the process is called. This is effected by the oiling of a silk handkerchief, and passing the whole gradually up the vagina, so as to allow the formation of a clot and the arrest of the bleeding, or, as it is called at such times, the *flooding*.

If everything goes on favourably, the patient very seldom requires any medicine —except the sedative draught—till the fourth day, when a mild dose of castor oil should be given to act on the bowels; while if the child has been placed at the breast from the first hour, it is seldom in a healthy woman, when common care is taken, that anything will be required for the milk or the breasts. For the management of the navel, and many other important matters on this subject, see INFANT.

LABURNUM.—A beautiful ornamental shrub, common to our grounds and gardens; only medicinally worthy of notice from yielding seeds of an acrid and extremely drastic nature, producing, when eaten, excessive vomiting, relaxation, cramps, and the characters of an irritant poison. The treatment, when they are accidentally eaten, is to give an emetic of white vitriol, and afterwards support the body by ammonia, brandy, and cordials. See POISONS.

LABYRINTH.—The name given by anatomists to a portion of the internal ear. See EAR.

LAC.—Milk, which see.

LAC AMMONIACUM.—A mixture called the milk of ammoniacum, from its resembling that fluid in appearance. It is prepared by rubbing, slowly and perfectly, down a certain quantity of the ammoniacum with water, till the whole, by steady and careful trituration, is suspended in the water. This makes one of the best expectorant mixtures in the Pharmacopœia for coughs, colds, and hoarseness.

LAC, SHELL. See SHELL-LAC, and SEED-LAC.

LAC, SULPHUR. See SULPHUR, MILK OF.

LACHRYMA.—A tear: a Latin word, from which anatomists have derived the term *lachrymal*, applied to two small glands, one being situated at the upper and outer sides of each orbit, whose function is to secrete the tears for either eye. Also the name of two bones which support the lachrymal glands. See EYE.

LACTUCA, OR LACTUCARIUM.—The active principle of the garden lettuce. A narcotic juice, which, on incisions being made in the stalks of the plant, exudes, and dries on exposure to the air. In all its properties it resembles opium, only being weaker in its narcotic effects. Dr. Duncan, of Edinburgh, about fifty years ago first discovered this new drug, and for many years it was largely used in practice, and, being less exciting than opium, was better suited for fevers and affections of the head than that drug. It is now, however, but seldom used, being superseded by morphia.

LAMBOID, OR LAMBOIDAL.—The anatomical name for one of the three true sutures of the skull, so called from its resemblance to the Greek letter L. This suture joins the parietal bones with the occipital.

LAMELLA.—A scale or a plate, from which anatomists derive the term lamellated, to express a certain structure of some of the tissues of the body.

LANCET.—The fine, delicate instrument which surgeons use to bleed with; a double-edged, lance-shaped instrument, fixed on moveable handles, and made of different angles, either acute or obtuse, according as the operator wishes to make a large or a small opening in the vein. See BLEEDING.

LAPIS.—The Latin for a stone, and a term still occasionally applied to drugs, as the *lapis infernalis*, or infernal stone, —a caustic, a name chiefly applied to bluestone, or sulphate of copper.

LARCH.—A well-known tree, belonging to the family of the pine; the tree, besides yielding a common rosin, produces the liquid resin known as Venice turpentine.

LARD.—The fat extracted from the

fleed of a hog, and known in medicine as *adeps* or *axungia*, used for making ointments and cerates.

LARYNGITIS.—An acute inflammation of the mucous membrane lining the larynx, particularly the *glottis* and *epiglottis*.

The SYMPTOMS of this serious disease are great constitutional disturbance; difficulty of breathing and swallowing; a dry, harsh cough, with a wheezing noise at every inspiration; the voice sinks to a hoarse whisper, and finally becomes inaudible, the moving lips being the only indication of the patient's speaking; the countenance becomes dark and livid, and respiration is carried on with gasping and extreme oppression, death by suffocation terminating the case unless relieved by timely aid.

The TREATMENT consists in hot fomentations, blisters, cupping, the hot bath, an active employment of calomel and opium every three hours. This disease is apt to terminate in a state of chronic inflammation, which requires a treatment analogous to that of diphtheria—cauterizing the throat, leeches or counter-irritation without, and by a course of antimonials, with mercury, internally.

LARYNX, OR THE ORGAN OF VOICE.—This important organ lies at the root of the tongue, and at the top of the windpipe, and is composed of seven cartilages, a number of ligaments binding each together; four delicate ligamentous filaments, called the *vocal chords;* a series of small, slender muscles to regulate the play of the cartilages, and a number of arteries, veins, nerves, and lymphatics. The two largest of the cartilages, the *thyroid,* meet in the front in a sharp angle, which, projecting through the skin, produce the prominence known as *Adam's apple;* within and behind these are situated the two *cricoid* and two *arytenoid* cartilages, while across the triangular space enclosed are stretched the four vocal chords, in two rows, one above the other, the space between the chords being called the *rima glottis* (slit or chink of the glottis); while at the angle of the junction of the two thyroid cartilages behind rises the last or seventh cartilage, the *epiglottis,* which answers the purpose of a lid, and in swallowing covers the glottis, and prevents any foreign substance from entering the larynx, or the trachea or windpipe, below it. See DIGESTION, *cut*, and VOICE.

LATERITIOUS.—A name given by physicians to a dirty-red-coloured precipitate, sometimes found in the water of persons labouring under disease; in other words, a brick-coloured sediment in the urine.

LATISSIMUS DORSI. — The name of a broad, flat muscle of the back and side of the thorax, and which, being inserted into the arm, has, on account of its great strength, considerable power in moving the arm downwards and backwards, in the action preparatory to delivering a blow; and when the hands and arms are fixed, this muscle assists greatly in drawing up the body to their level.

LAUDANUM. — Tincture of opium. This, the strongest and most generally used of all the preparations of opium, is a simple spirit solution of the narcotic gum, and prepared by macerating opium, cut into small pieces, for a definite number of days in proof spirit, in the proportion, according to the London Pharmacopœia, of 10 drachms of opium to 1 pint of spirits.

The properties and uses of laudanum will be fully explained under the head of Opium, which see. It will be sufficient to say here that, according to the dose given, laudanum acts as a diffusible stimulant, or antispasmodic, as an expectorant, anodyne, sedative, and narcotic. The full adult dose is from 20 to 25 drops as a sedative; from 7 to 10 drops, repeated every hour or two, as a stimulant; and as an anodyne from 15 to 20. Laudanum should never be given to infants unless under the direction of a medical man. —Professional name, *tinctura opii* and *tinctura thebiacæ.*

LAUREL.—The family to which this well-known plant belongs is extremely numerous, and yields us some of our most valued drugs, among which may be mentioned camphor, cinnamon, prussic acid, and several others.

The laurel itself is no longer used in medicine, on account of its uncertainty of action; a distilled water from its leaves, sometimes used for culinary purposes, has often produced the most dangerous and even fatal effects, from the presence in it of the principle which forms the basis of hydrocyanic acid.

LAVENDER.—This aromatic, bushy shrub, the favourite of our gardens, and known to botanists as the *Lavandula vera,* is a plant belonging to the Natural order *Labiatæ,* and, though abounding in a warm, aromatic essential oil, is only used in one preparation in the Pharmacopœia, that of the compound tincture (*tinctura lavandulæ compositæ*). Lavender is chiefly employed to produce an elegant and refreshing perfume, a spirituous solution of the oil, with musk and other scents, in the compound known as lavender water.

The compound tincture is used as a stimulant, in doses of from 15 to 30 drops, either alone or in combination with sal volatile, ammonia, and ether.

The dried strips of lavender, when burnt, form an agreeable and useful fumigation in an invalid's chamber, and act, in a measure, as a disinfectant.

LAVEMENT.—A French word, signifying an injection or enema, whether composed of simple warm water, or of gruel, salts, oil, or other cathartic substances.

LAXATIVES.—A class of medicines which act mildly on the bowels; stronger than aperients, and less active than purgatives. Aperients and purgatives may be made laxatives by enlarging or modifying the dose. Treacle, honey, manna, and confection of senna, or the lenitive electuary, are among a few of the simple laxatives.

LAZARETTO.—An isolated building set aside for the reception of goods and persons for the performance of quarantine. A sanitarium, where passengers and crews arriving from suspected ports are obliged to remain for, on some occasions, forty days, under the surveillance of proper officers. If, at the expiration of that ime, no illness has taken place of a alignant character, a clean *bill of health* given, the company is declared to be on-affected, and allowed to mingle ith their friends and quit their irksome rison.

LEAD.—*Plumbum.* Though one of he most useful of all the metals in the rts, and forming, with the acids, preparaions and pigments of the most opposite olours and properties, only one of its ompounds is used in medicine, namely, he acetate (*acetas plumbi*, or sugar of ead), formerly called *saccharum saturni*, or the sugar of saturn, the alchemists giving the name of saturn to lead from its gravity, as that of mercury to quicksilver for its subtle properties.

All the preparations of lead are active poisons, producing paralysis, and affecting even those who work in the mines, or are employed in smelting its ores, causing a nodding palsy, or constant tremor of the limbs or hands. See SUGAR OF LEAD, POISONS, COLICA PICTONUM.

LEAMINGTON SPAS.—The waters of these medicinal springs are purely saline, their efficacy depending on the soda and magnesia, in the form of muriate, carbonate, or sulphate, which they hold in solution.

The cases in which the Leamington waters are most beneficial are old standing stomachic derangements, gout, and liver affections of a chronic character. See MINERAL WATERS.

LEECH.—There are several varieties of this reptile; that, however, which is employed for medical purposes is known as the *hirudo medicinalis*, and though found in the ponds and waters of most parts of Europe, the best and healthiest have been for many years brought from Sweden, though many parts of Germany now produce them; indeed they may be bred in any natural or artificial tank, pond, or reservoir properly prepared.

The construction of the leech, and its adaptability for the purpose for which it is intended by nature, is most singular; the broad extremity, or tail, is supplied with a circular disc, which acts like a boy's sucker, and is the means by which the animal attaches itself to the object on which it intends to feed; the narrow and sharp extremity is furnished with a triangular mouth of three jaws, each supplied with a row of minute teeth, with which it perforates the skin, and by means of its peculiar construction forming a vacuum, into which the blood from the small vessels instantly mounts as into a cupping-glass; and as the whole length of the body consists of a series of cells, as soon as the first receptacle is filled, the food or blood passes into the next cell, leaving the first to be again distended, by which time the contents of the second have been passed to the third, and so on till every cell, from tail to mouth, is filled, when the gorged animal relinquishes its hold, for a moment hangs by its sucker, and then drops off, and lies passive till the contents of its series of stomachs have been digested; the better to effect which, the leech generally vomits a portion of its gluttonous meal. Leeches are very fastidious, and even though in health and vigorous for a meal, will not bite if the part offered to them is in the least dirty or impure; the skin, therefore, must be always well washed before applying the leech. With every precaution, it is, however, sometimes most difficult to make leeches bite, or fix on the spot required, and hours are often expended in the fruitless task of endeavouring to make them do so. A scratch with a pin, the point of the lancet, or a penknife, by removing the outer cuticle, will, however, induce them to bite instantly, especially if the slightest exudation of blood takes place. When persons do not like to submit to such a scarifying process, by dropping the leeches into a little *porter*, or water with a few drops of bitter tincture added, then taking them out, and letting them crawl on a dry cloth for a few minutes, will cause them to bite immediately. Some persons apply salt to the mouths of the gorged leeches, to make them emit the blood; this is a very bad plan; the best method is, immediately they fall off, to grasp the tail of each by the thumb and finger of the left hand, and with the right, draw the leech through the fingers: when all the blood has been expelled, the animal should be put in a basin of clean water. If this plan is pursued properly, one leech may be made to bite for five or six times in rapid succession, merely smearing the part where it is desired to fix it, with the blood oozing from the first bite, and after the third application, dropping it for a minute in porter, or some slightly bitter mixture. With ordinary care, three leeches may at any time be made to do the duty of a dozen. Applying milk or cream to the part is quite unnecessary; let the place be clean, free from hairs, and nothing else is required. To avoid much handling, glasses have been made, called leech-glasses, into which they are slipped, the mouth protruding from a small opening at the end, this being held above the place selected for the application of the leech, the animal, having no escape, fixes at once. The amount of blood each leech abstracts, with what is exuded afterwards by the aid of warm water, is between three drachms and half an ounce; a good-sized leech may contain from a drachm to a drachm and a half.

In applying leeches on infants, care should be taken always *to select a spot over a bone*, where, in case of necessity, pressure could be established should the after bleeding be difficult to stop. With adults, this can generally be effected by wetting a piece of lint with extract of lead, or by sprinkling a little powdered alum over the bites, or by, in extreme cases, touching the openings with caustic; but whenever practicable, pressure, either by the fingers or a bandage, it should be remembered, is the best and most natural way of stopping the hemorrhage from leech bites.

LEEK.—The *Allium porrum*. This well-known culinary vegetable, a member of the onion family, possesses many of the properties common to the order to which it belongs, besides some peculiar to itself, but is now almost excluded from the practice of physic as a medicinal agent, though in many respects far superior to either the onion or the garlic. Independent of its excellent qualities as an ingredient in broths and other culinary preparations, the leek acts on the system as a diaphoretic, diuretic, and expectorant; for which latter purpose particularly, on account of the large proportion of mucilage contained in the plant, it is admirably adapted, especially when stewed in milk, and taken at bedtime. The only preparation in which the leek is now employed medicinally is an ointment, applied externally as a stimulant to old glandular tumours, swelling of the joints, and as a discutient generally.

LEG.—The lower half of the inferior extremity, extending from the knee to the ankle-joint, and includes the *tibia* and *fibula*, or bones proper to the leg, and the kneecap, or *patella*, besides the muscles, tendons, ligaments, and articular investments, and the skin.

Besides the ordinary accidents of Dislocation and Fracture (which see), the leg, on account of its distance from the heart or circulation, is liable to frostbites, inflammations, ulcers, and several kinds of diseases and affections.

The most important and singular disease to which the limb, however, is liable, is a sudden swelling, attacking females from between twelve hours and seven days after confinement. This disease, known professionally as *phlegmasia dolens*, and commonly as the *swelled* or *white leg*, is caused by the pressure of the child before birth, or during the progress of the labour, on the lymphatics, inducing a torpidity of the vessels, which eventuates in a white, oedematous state of the entire limb, from the groin to the ankle, though more particularly affecting the leg proper. The extreme pain and heat attending the dropsical appearance of the limb has induced surgeons to give the affection the name of Phlegmasia Dolens. This disease is attended by a large amount of febrile irritation, thirst, a white and coated tongue, and a quick but feeble pulse.

The TREATMENT consists of saline diaphoretics, opium, and calomel; the application of leeches and warm fomentations to the part; at the same time, the diet must be farinaceous and unexciting, and after the subsidence of the swelling and inflammation, tonics, such as quinine, with the mineral acids, and exercise, must be employed, with gentle friction, or the use of a current of mild electricity daily through the part.

LEGUMINOUS PLANTS. See LENTILS.

LEMON.—The *Citrus communis*, or the common lemon. This useful fruit, a native of the south of Europe and the north of Africa, is not only used for culinary purposes, but is extensively employed as a medical agent of great value.

MEDICAL USES AND PREPARATIONS.—All the medical properties possessed by the lemon derive their efficacy from the peculiarity of the acid juice it so largely contains,—properties shared in, but not to the same extent, by all the family of aurantiaceous plants, especially the orange and lime.

The properties of the lemon reside in the juice, or in the citric acid it contains. Lemon juice, or citric acid, which is its active principle, acts on the system as a tonic, stomachic, diaphoretic, antiscorbutic, and antiseptic, and forms the basis of several refreshing beverages and effervescing drinks. The only preparations of the lemon used in medicine are the dry peel, the fresh juice, and its active principle, the citric acid.

The peel, or *cortex limonis*, is sometimes used in the form of an infusion, with or without soda, or some bitter bark, as a tonic and stomachic, and enters into the composition of some bitter infusions and mixtures. An essential oil, obtained in large quantities from the fresh rind—*oleum limonis*—is never used as a medicine, being solely employed for the purpose of perfume.

The recent or freshly expressed juice of the lemon is used as an antiscorbutic, especially in that once formidable disease, scurvy, for which, both as a preventive and corrective, it acts as a specific, the dose being from a teaspoonful to a dessertspoonful twice a day, taken with a sufficiency of sugar to overcome its intense acidity. In this state, the juice, mixed with a little carbonate of potass dissolved in water, forms both an effervescing draught and a diaphoretic.

In some conditions of gout, particularly where there is a large deposit of chalky concretions, the lemon juice, taken fresh three times a day, is often attended with great success. See LIME JUICE, and CITRIC ACID.

LEMONADE.—A cool and grateful beverage, used as a refreshing drink in hot weather, and as a refrigerating diluent in cases of fever or illness.

There are many methods of preparing this simple and agreeable species of sherbet. The most approved plan is to infuse the rind of twenty-four lemons, cut thin, for some hours, in six quarts of boiling water, first extracting a part of the oil by rubbing a few lumps of sugar over the peel, and infusing them with the rind. The juice of the lemons is then to be squeezed into a bowl, and mixed with one and a half pounds of lump sugar. The infusion is next to be mixed with the sweetened juice, and the whole strained and bottled for use. See DRINKS.

LEMON, SALTS OF.—The article vended under this name as a detergent, to remove ink-spots and stains, is the powder of a salt obtained from the sorrel plant—the *Sal acetosella*,—often mixed with tartaric acid, and still more frequently with oxalic acid. As there is no lemon whatever, or any trace of citric acid, in this salt, care should be taken never to use it for medical or culinary purposes, as the substance, under any circumstance, is certain to contain a large portion of poisonous matter.

LENITIVE.—A gentle aperient.

LENITIVE ELECTUARY. — The compound confection of senna. A substance made with powdered senna leaves, stewed with prunes, sugar, and some spices, the whole, when properly prepared, being of the consistence of a preserve, and looking and tasting not unlike one. The dose is from 1 to 2 tablespoonfuls, eaten like a jam. See SENNA.

LENS.—A species of prism for converting into a focus the rays of light. In anatomy, the lens is the crystalline humour of the eye, placed in the centre of the axis of vision, and has the power of drawing into one point the rays of light. See EYE.

LENTILS.—A common name, applied to all leguminous plants, or pulses, or all podded vegetables of the pea or bean family which are used for food. In France and the south of Europe the word is employed to express a small species of bean plant, very largely used as a food, both boiled as a vegetable and made into a bread when dried and powdered. From the fact of all lentils containing a large proportion of nitrogen, they are regarded as highly nutritious, their proximate principles consisting of starch, gum, albumen, sugar, mineral phosphates, woody fibre, and water. The powder of the lentil forms a large proportion of the invalid food known as the Revalenta Arabica. See Invalid, Food of.

THE LENTIL.

LEONTODON TARAXACUM.—The botanical name of the Dandelion Plant, which see.

LEPRA, LEPROSY.—The disease known in Biblical writings by this name, and which was regarded with such disgust and dread, that the afflicted were, to a certain extent, divorced from all human ties and sympathy; the houses they inhabited razed to the ground; the very bricks and earth used in their construction reduced to powder, consumed by fire, and then carried far from all habitations, and there flung to the winds, or cast on the waters,—this once-fatal pest seems, in the lapse of centuries, to have died out, or lost its virulence, as the only affection now known to medical men at all approaching to the features of the ancient leprosy is a peculiar scaly eruption of the skin, to which the name of *lepra* is given. See Skin, Diseases of. Whether the disease which forms the basis of so many serious affections, and that national scourge, *consumption*, and universally known as scrofula, is the modern form and variety of leprosy, is a subject of interesting inquiry to the scientific physician.

LESION.—A surgical term for any structural hurt or injury to an internal organ. Any wound, breach, or loss of substance, caused by disease, or accident to a part, is called a lesion.

LETHARGY.—A dull, comatose state of the mind; a prolonged condition of *coma*. A condition of the nervous system depending upon some diseased state of the brain, by which that organ becomes excessively charged with blood, inducing a partial or complete state of apoplexy. A symptom of many forms of disease. See Coma, Apoplexy.

LETTUCE (*Lactuca sativa*).—This well-known salad is, in a medical point of view, chiefly remarkable from containing a large quantity of a milky juice, which, on exposure to the air, becomes of a consistency resembling cobbler's wax, affording a narcotic extract possessing the properties of opium in all its characters, only very much milder.

This extract, known professionally by the name of *lactucarium*, was first discovered by Dr. Duncan, of Edinburgh, about the beginning of this century. See Lactuca. It is on account of the redundancy of this substance in the lettuce that the sedative effect is experienced by those who eat largely of the plant.

LEUCOMA.—White specks in the eye. Among surgeons this is regarded as a diseased state of the lymphatics of the horny covering, resulting in an opacity of the cornea, frequently called *albugo*.

Scarpa recommends, as a cure for this condition of the organ, a lotion or eye-water, made by dissolving 2 scruples of the muriate of ammonia, or sal ammoniac, and 4 grains of the acetate of copper (verdigris), in 8 ounces of lime water, letting it stand for twenty-four hours, and then straining,—the clear liquid being used three times a day, and persevered in for several months.

LEUCORRHŒA.—The flow or discharge of a white, glairy fluid from the vagina,—the Whites,—professionally known as Fluor Albus. See Women, Diseases of.

LEVATOR.—A lifter up. The name applied by anatomists to such muscles as lift up or open a part of the body, such the muscles which open the eyelid—*ator oculi;* the *levator anguli oris,* the elevator of the angle or corner of mouth; and *levator ani.* The opposite of muscles are called *depressors.*

LEVIGATION.—Reducing substances a fine powder by means of friction and ter. The article is laid on a smooth b of marble, and by means of a kind flat-headed pestle, called a muller, and addition of water, is rubbed into a oth paste. This process is only used preparing a few earthy salts and eral oxides, or for mixing paints with or water by painters.

LEY.—A strong solution of any alkali water; a *lixivium.*

LICHEN.—A name applied to an ptive disease of the skin. See SKIN, EASES OF.

LICHEN.—The botanical name for sses of all kinds, or the cryptogamous ily of plants, or *Algæ.* See ICELAND OSS.

LIFE, ANIMAL, consists in the gular and healthy performance of all functions of the body; and though o of these are called *vital* functions, e action of one is so necessary to the her, that neither can be wholly sus- nded for the shortest space of time thout an immediate cessation of one d all of those operations of nature nstituting what is known as functional e.

The heart, lungs, brain, stomach, liver, dneys, and pancreas, with the skin and ngue, constitute the chain of important gans, or living laboratories, in which, by the power of which, the several eat offices of life are performed. Of e system of inferior or assistant organ- ation, resulting in chylification, lacta- on, and the salivary and lymphatic stems, with a few others, making up l the direct and collateral operations of e animal body, it is quite unnecessary speak further in the present article. ny one of the organs of the body, hether belonging to the first or to the econd system (except two), may have eir operations suspended, or, in other ords, thrown out of gear, or their work- g functions completely arrested, for an definite period of minutes, or probably, certain cases, for hours, without check- g the harmony of life: but with the art or the *lungs* the case is different; r if the action of either is completely spended for a space not longer than ro minutes, the blood in one instance will coagulate in the vessels of the body; in the other, the lungs will lose the power of transmitting oxygen to the blood: in either case death is the result, and nearly in the same space of time, whether by coagulation of the blood in the vessels, or by the cutting off of the oxygen from that fluid. The blood is called a vital fluid, not only because it performs a vital function, but because it is a vital or *living fluid:* that vitality, however, only exists so long as the blood is in motion; the moment it ceases to move it loses its integrity, and by the time it has coagulated and become a clot it is dead. The number of seconds required to coagulate the blood in the vessels is nearly equivalent to the time requisite to deprive the blood of its oxygen in the lungs.

Though respiration and circulation are esteemed as the strictly vital functions, there is no doubt that there exists a third undiscovered principle, if not the specific stimulant of both,—an agent generated, like animal heat, from the two functions referred to, and while in full operation.

That that principle is electricity, in some form or other, there seems every reason to conclude; and modern investigation seems to point to the fact that such streams of electrical or magnetic power are constantly generated in the human system by an action between the salts of the blood, the intervening cellular tissue of the lungs, the carbon, and the atmospheric air.

Whether this principle — the motive power of the whole frame, and the *vis vitæ* of the old philosophers—was a mysterious agent imparted to man at his birth, and vaguely denominated the soul, or is but an external element drawn into the system from the physical world; or, finally, whether the theory now broached of its being the first great vital principle, generated by ceaseless increments from the other two, and, by the potency of its influence on the frame, serving, like a chronometer, to keep the wondrous mechanism of the body in harmony and time, is a subject hitherto of profitless speculation, but one that may hereafter become a theme of fruitful and beneficial inquiry.

To enter upon the question of what is life in a physiological sense would be out of place in a work like this; it will be sufficient, in conclusion, if we say that life depends on irritation, and that irritation is the distinguishing principle between organic and inorganic matter, or between an organized body and an inorganic substance.

LIGAMENT.—The name of a particularly tough, elastic, fibrous substance or texture among the solids of the animal body. Ligaments, sometimes called tendons or sinews, are of various sizes, shapes, and thicknesses: thus, when thinly expanded, like the inner skin that envelops the different sections of an orange, it is called a *ligamentous sheath*, and covers each muscle of the body in a separate investure; when bound together in bundles of white, glistening threads, and forming the two extremities of a muscle, it is called a *tendon* or sinew, the substance commonly known as paxwax; the upper tendon serving for the origin of the muscle, or its place of attachment, and the lower, and always the longer, for its insertion.

The next important use of ligaments is to bind one bone to another, and all the bones of the skeleton together; they also connect cartilages with bones, as exemplified in the case of the false ribs with the continuation of the breast-bone. The manner in which the various bones are individually connected with each other, more particularly those composing perfect and imperfect joints, is one of the most beautiful provisions in the human anatomy, combining both strength and neatness.

The third general use of ligaments is when they are expanded in fibrous layers, like parchment, to close up large apertures across bones, as in the *pelvis*, to prevent the escape of the organs within. Ligaments are round or flat, broad or narrow, and are named sometimes according to their shape, very frequently after their position, and sometimes from some speciality of their duty; or else they are called after the name of some distinguished anatomist, as *Popart's ligament*.

LIGATURE.—Any tight-fitting string or cord; a term in surgery implying a thread tied round a bleeding artery; a bandage; a tape drawn tightly round a limb, to stop the circulation in the main artery, like a *tourniquet*, or to prevent the absorption of some *virus*, as from a reptile's sting. Ligatures for arteries are generally fibres of strong, fine silk, or unbleached thread.

A very fine, ductile, metallic thread, generally of silver, has been much used of late years, though for all practical purposes the silk fibre is quite sufficient.

LIGHTNING, DANGER FROM.—Though every one is fully aware of the power and destructiveness of lightning, few persons, comparatively speaking, know how best to avoid the possible danger when exposed to, or overtaken by, a thunderstorm; and still fewer pause to exercise the commonest judgment in reflecting on the actual risk they too often run in selecting a place of refuge under such circumstances.

PLACES TO BE AVOIDED.—An approaching thunderstorm can generally be foretold with accuracy by persons accustomed to observe the state of the heavens, and minutely study the external aspect of nature, while a perusal of the glass and thermometer will always give the scientific student a timely foreknowledge of coming events. But to the generality of people storms of this nature burst upon them unanticipated, and if encountered in the streets of a town or the open country, the only misfortune apprehended is a wetting of their garments more or less severe, while, ignoring the lightning, and regarding the rain as the only danger of a thunderstorm, they rush to the nearest point if it can afford only a partial protection from the shower, without bestowing a thought upon the *fitness* of the place, so long as it will supply the purpose of a temporary umbrella, it being often the very situation they should most carefully avoid.

How greatly might the number of deaths be decreased which annually result from lightning if every one knew, or those who knew would only remember at the right time, the following simple facts,—that lightning is only electricity highly concentrated, and that there are agents which *attract* it, and others which *repel* or cut off its contact,—in other words, *conductors* and *non-conductors!*

Foremost among the *conductors* or attractors of lightning are TREES or vegetables of all kinds; METALS, particularly when bright; and WATER. Among the *non-conductors*, or repellants, are GLASS, SILK, WOOL, and FEATHERS, when dry.

With this knowledge—and thousands possess it—it seems like an actual courting of danger when persons foolishly or negligently place themselves under trees for a shelter during rain and lightning.

The ancients had a belief that certain trees, particularly the laurel, were an actual protection from lightning; nor has faith in the non-conducting properties of that classic tree entirely died

; still, with the known contrary
ƒ all other members of the vege-
ingdom, no one is justified in
attempting the experiment, but
ıt once avoid the laurel, and every
ısh, or hedge whose boughs or
may offer a covering or a shield
lownward or oblique direction of
.

ɒendent of their inherent conduct-
ɒperties, trees or fences, when
ɒd with water, are rendered even
angerous than when dry. For
e reason, boat-houses, cart-lodges,
ı huts with thatched roofs are to
ılly shunned, both because they
'etable, and in a storm retain a
nount of water. The margin of a
ɒond, river, or even a pool collected
ıe falling rain, should also be
if any temporary shelter should be
ıear such accumulations of water.
ɒwns, *door-steps*, the *mouths* of
courts, or *archways*, or any
open at both ends, is very dan-
Whether in town or country,
as a thunderstorm breaks over
ll pedestrians, as a matter of
precaution, whether ladies or
ıen, should put out of sight all
hains, seals, or metallic articles
from their glitter, to attract the
ıg if left exposed at the side or
ıt pocket, a danger which, since
ıring of so much steel crinoline,
annot be too careful to avoid.
same time that the watch-chain
out of view, the umbrella, if
d on wire, and having a bright
should be put down, the ferule
with mud, and the whole used
lking-stick, rather than incur the
of keeping off the rain by walking
superior kind of lightning con-

ng taken such general and per-
recautions, the individual should
the *centre* of the road, and walk
l despatch to the nearest house;
at is too far to be reached, stand
ɒen field or road till the subsidence
storm, regarding the wetting as
consequence than the danger of
the lightning under such de-
—care being always taken not to
ear trees, water, or an iron fencing.

AUTIONS TO BE TAKEN.—When
, the safest part of a house during
derstorm is the cellar, but at
istance from the walls,—the pro-
being, that should the house be
struck, the electric fluid will be diffused, and pass off by some of the metallic conductors it would meet in its way down, and finally escape before it could reach the basement.

If the cellar is not attainable, a room in the *centre* of the house, and the *centre of the room*, should be selected, when, the fire-irons having been covered with the hearthrug, and any other bright article removed or covered, the hair squabs from the sofa should be laid in the middle of the floor, and on these one or more chairs placed for the accommodation of the members of the family, who, thus removed from contact with the walls and the danger of bell-wires, will, by sitting on or above the hair mattress, be isolated from the ground or any conducting agent. A still more perfect isolation may be effected by placing four or eight common wine bottles in the centre of the room, laying a deal board upon their necks, and putting a chair on the top of this, on which one or two persons may ascend, and with almost perfect safety remain till the storm has passed: the mattress may, as an extra precaution, be laid between the chair and the board.

TREATMENT.—When a person is struck by lightning, he is either instantaneously killed, partially stunned, or rendered perfectly insensible, with all the symptoms of asphyxia; the body being very pale, and the limbs extremely flaccid, and capable of being moved or placed in any situation desired.

The insensibility and flaccidity of the muscles is always in proportion to the severity of the shock to the nervous system.

One or two basins of water should be suddenly dashed on the patient's face and chest, the parts being hastily dried before the water is repeated; hot bottles of water must be applied to the feet, and mustard poultices to the spine and pit of the stomach; artificial respiration should at the same time be adopted, and, if necessary hot tiles applied to the dorsal and lumbar regions of the spine, the same as recommended in Drowning, which see.

As soon as the patient is able to swallow, small doses of brandy and water, hot, with spirits of sal volatile, are to be given every ten minutes. A hot bath, or a stimulating injection of gruel and turpentine, should also be employed, especially if the recovery be long delayed. Attention must be paid to keeping the body warm during all these manipulations.

The after treatment must depend greatly on the age and strength of the patient, and the severity of the shock to the brain and nerves. See ASPHYXIA.

LIGNUM.—A Latin word for wood, and as a prefix used before a few of the woody parts of trees to which neither *radix* nor *cortex* are applicable; thus the chips of logwood and quassia are called *lignum hæmatoxyli*, and *L. quassiæ;* the word is also applied to the—

LIGNUM VITÆ, or WOOD OF LIFE. —The wood of the guaiacum tree, or tree which yields the guaiacum resin, and known in common by the names of *lignum benedictum*, *lignum sanctum*, holy or blessed wood, and *lignum Indiana*, Indian wood.

This wood, a native of Guiana and the West Indies, is greatly esteemed in the arts on account of the singularity of its layers and the remarkable closeness of its texture. In medicine, it is only noted for yielding the resin already mentioned, which see.

LIMATURA FERRI, IRON FILINGS. —The common filings of a smithy, drawn through a sieve by means of a magnet, to separate them from all impurities, and used in medicine as a tonic. See IRON.

LIME.—*Calx.* An alkaline earth, formerly supposed to be a pure earth, but now, by chemical investigation, discovered to be an oxide of a metal, *calcium.* The carbonate of this metallic earth is more generally found in a native form than any other earthy compound used in medicine: marble, chalk, shells of fish, and insects, are all carbonates of lime, and only require a strong fire, such a heat as that generated in kilns, to drive off the carbonic acid gas from their composition, and convert the marble, chalk, or shells into "*quick-lime.*"

PREPARATIONS AND USES.—The preparations of lime in general use for medical purposes are,—

1st. The *Carbonate of Lime*, or common chalk, or whitening, though the preparation in general employment is prepared in a peculiar way, by lixivation, and then precipitated in conical masses, when it receives the name of *prepared chalk*, or precipitated carbonate of lime, crab's eyes, crab's claws, &c.

2nd. The *Muriate of Lime*, which from being always kept in the form of solution, is called the *liquor calcis muriatis*, but according to the modern nomenclature, the solution of the chloride of calcium.

3rd. *Chloride of Lime.* This preparation *of lime is* used either in the form of a powder, or dissolved in water, and as a disinfectant is very largely employed.

4. The *Phosphate of Lime.* This preparation, the basis of all bones, was some years ago very largely used in medicine, the burnt shavings of hartshorn being employed for the purpose. There are other preparations of lime in use, but the above constitute the most important.

Medical Properties and Uses.—Lime, according to the preparation of it employed, acts on the system,—

1st. As an antacid, absorbent, and as an astringent in diarrhœa and cases of relaxation. For these purposes, the carbonate is specially beneficial, in doses varying from 10 grains to 1 drachm, either alone or combined.

2nd. As a deobstruent, tonic, and alterative in all scrofulous enlargements, such as *bronchocele*, or *goitre*, white swellings, and glandular diseases of the neck; for which diseases the muriate, or its solution, the *liquor muriatis calcis*, in doses of from 10 drops, four times a day, increased to 30 drops at each dose, is the usual quantity prescribed.

3rd. As a stimulant, antiseptic, and disinfectant. In these forms, however, it is only employed externally to ill-conditioned or sloughing sores, to weak granulations and unhealthy ulcers; the chloride, either in powder or solution, being employed for the purpose.

4th. As a special and local tonic in all cases of rickets, and fracture in aged persons, or those affected with a weak and extremely debilitated constitution: where the system requires a quantity of bony matter to give firmness to the bent limbs of children, and enable the fractured bones of the infirm to throw out healthy *callus* to favour reunion; in all such cases the phosphate of lime is of great benefit, and should be given to children in doses of 4 grains every six hours, and of 10 or 15 grains every four or five hours to adults and the aged.

Finally, as an anthelmintic, a depilatory, and an escharotic. For the latter effect, especially in certain phagedœnic sores, when it is necessary to destroy some portion of the ulcer, a little quick-lime sprinkled over the surface is all that is necessary.

In the first—as an anthelmintic—the preparation used is the *aqua calcis*, or lime-water, made by slaking a piece of quick-lime in a jar, then covering it with water, stirring the whole completely together, covering it closely from the air, and, when clear, giving the patient

neglass to a tumblerful three
y.
ter may be taken either alone
ed with milk, and in any quan-
mach can retain. It has been
hat lime-water has the power
nd then expelling worms; but
nistake: it has no effect upon
atever; but by acting on and
the slime in which they form
, or *nidus*, the parasites are
lled, after a few days' use of the
, by giving a brisk purgative.
ts.
a person is severely burnt by
, as sometimes happens from
n slaked lime, the best applica-
part is *vinegar*, and afterwards
,—first to neutralize, and then
way the corrosive powder.
—The lime plant, a species of
family, the *Citrus limetta*, is a
Asia, though now largely culti-
he West Indies, where it grows
ght of seven or eight feet, and is
to form hedges, for which pur-
rickly branches are admirably

THE LIME.

The fruit, of which it bears a
ntity, resembles the lemon, only
aller, and having a nipple-like
in the centre of each. It is
ltivated for the sake of its acid
ich, being more abundant and
han that of the lemon, is exten-
ployed as an antiseptic in scurvy,
it is now universally used.
licinal efficacy depends on the
unt of citric acid contained in
The dose is from one to two
nfuls, with sugar, two or three times a day, according to the nature of the disease.

LINCTUS.—Anything to lick; a term used in the Pharmacopœia to designate any soft confection or mixture, as the conserve of roses, jams or jellies. A vehicle for any medicine to correct the state of the mouth,—such as borax and honey, which would be called a borax linctus.

LINEA ALBA.—The White Line. A name given by anatomists to a streak of white seen on the abdomen when the integuments are removed, caused by the blending together of the tendons of the muscles of the abdomen.

LINGUA.—The Tongue, which see.

LINGUAL ARTERY AND NERVE.—The name of vessels supplying the tongue with blood, and the sensation of taste.

LINIMENTS.—A class of medicaments used for external purposes, of a thick, saponaceous, or oily consistency, and of a warm, stimulating character. The word is often confounded with embrocation, though, properly speaking, the latter term should be applied to opodeldocs and spirituous compounds, and the word liniment confined to mixtures of oil, hartshorn, turpentine, and the common essential oils,—as those of thyme and amber. Liniments form an excellent application in cases of rheumatism, sprains, swollen joints, and chronic enlargement of the articulations and ligaments.

LINSEED.—*Linum usitatissimus.* The botanical name of the flax or lint, sometimes called rape seed. The only part of the flax plant used in medicine is the seed, which, made into an infusion, forms an excellent demulcent drink, particularly in affections of the kidneys and bladder, either taken alone or with a small quantity of powdered nitre. When combined with sugar-candy, liquorice, or honey, and the juice of a lemon, the infusion of linseed makes a very useful expectorant beverage in cases of hoarseness, colds, or inflammatory affections of the chest. It is only as an infusion that linseed should be given internally, for if boiled, so much oil and gummy matter will be extracted as to render the decoction extremely nauseous.

A large amount of coarse brown oil is obtained by expression from the seeds, which is occasionally used in preparing lotions, and when mixed with an equal quantity of lime-water forms an application formerly largely employed for burns, under the name of Carron oil. The residue, after expressing the oil, is used for feeding cattle, under the name of oil-cake. The dried seeds are also ground into a powder known as linseed meal, an article much employed for poultices in cases of suppuration, ulcers, and glandular enlargements, for which purposes it is strongly recommended, on account of its retaining its heat for a longer time than other poultices, and its soft emollient properties. In making a poultice of linseed meal, care should be taken to pour upon the powder as much boiling water at once as will be necessary to make the poultice of a sufficient and proper consistence, as the after addition of water will form a lumpy, unsatisfactory poultice.

LIPS, THE.—The portals of the mouth, and often the most expressive feature of the face. The lips are principally composed of the orbicular or circular muscles of the mouth, with the insertions of some of the smaller muscles of the cheeks, such as the levators and depressors of the angle of the mouth, which, with an amount of cellular tissue, give that prominence to the lips which constitutes their expression and beauty. The number of nerves and bloodvessels distributed to the parts, with the extreme delicacy of the inner cuticle, permitting their colour to be seen through its texture, accounts for that redness deemed so characteristic of health.

The lips, owing to their sympathy with the stomach, through the mucous membrane that lines them being a continuation of the internal coat of the stomach, participate with any severe or chronic affection of that organ. Thus in inflammation of the stomach the lips are dry, hot, and the red inner part unusually florid. In asphyxia they are purple, or of a dusky hue; and when the blood is impoverished, as in chlorosis, or anæmia, they are either pale or white. In young persons, and those of a costive habit of body, the unhealthy state of the stomach and bowels is clearly indicated by the cracked, rough, or bleeding condition of the lips. For such an affection, it is customary to apply lip-salve made of olive oil, white wax, and spermaceti; a few alterative doses of cooling medicine will, however, be found more efficacious than the best lip-salve ever invented.

The upper lip is liable to the congenital disease known as hare-lip, and the lower to a carcinomatous ulceration, usually called the smoker's cancer, from being frequently induced by smoking short and *dirty pipes*.

LIPPITUDO.—A chronic inflammation of the margin of the eyelids; a disease commonly known as blear-eyed, the treatment for which consists in a course of mild mercurial tonics, such as the Plummer's pill, compound decoction of sarsaparilla, and a solution of sulphate of zinc, applied twice a day to the part, and the nightly use of the golden ointment, or an ointment composed of the red precipitate and citron ointments, in the proportion of one part of the latter to four of the former.

LIQUORICE ROOT.—This well-known root, the *Glycyrrhiza radix*, is extensively cultivated in many parts of Europe, particularly in Italy and Spain; large quantities, however, being grown in Yorkshire, the plant requiring a light, dry, sandy soil.

The MEDICAL PROPERTIES of the liquorice root are those of a demulcent, expectorant, and diaphoretic.

The PREPARATIONS of liquorice in general use are those derived from the juice of the fresh root.

The most important is the article known as Spanish juice, though the largest in quantity and the best in quality is prepared in Italy, and sold in thick black sticks, each stick weighing from two to three ounces, and stamped with the word *Solizza*.

The next in estimation is prepared in small square cakes, and named, from the town where it is grown and manufactured, Pontefract cakes.

The third preparation is cast in small, quill-like moulds, and sold in lengths like pieces of black pipe, and known as refined juice, or pipe liquorice. The fresh root cut into shreds, and boiled with linseed tea, and then sweetened, is used both as an expectorant in colds, and as a demulcent drink in affections of the kidneys or bladder. All the preparations of liquorice are beneficial in coughs, colds, hoarsenesses, and sore throats.

LITHARGE.—A preparation of lead, obtained during the smelting of the metal, when, in consequence of the great heat used, the metal is partially vitrified. Litharge is an oxide of lead, and of different colours, being either pale or of a deep red, when it is called litharge of silver or litharge of gold.

Litharge is used in medicine to make the plaster commonly called diachylon, and which, when mixed with rosin, constitutes the adhesive or white sticking plaster in such general use.

LITHIÆ.—The name of an alkaline

rth, some forms of which are occasion- lly found in urinary calculi. From the me substance we obtain the lithic acid, principle always present in urine.

LITHONTRIPTICS.—Medicines sup- sed to have the power of dissolving ones in the bladder, or urinary calculi.

LITHOTOMY.—One of the most im- rtant operations in surgery, the opera- n termed cutting for the stone,or remov- g from the human bladder such calculi as, om their size and hardness, can neither expelled from that organ, nor broken wn in it, and so discharged in minute agments by the operations of nature. here were formerly many modes of per- rming lithotomy. Of late years, how- er, all these have resolved themselves to two methods; viz., by making the cision through the *perinæum* laterally, from behind through the *rectum*. The tter mode, however, is now but seldom lopted.

LITHOTRITY.—A milder and less ngerous mode of operating for stone an by lithotomy, and introduced into actice about forty years ago. By this ethod the use of the knife was not re- uired, the patient's system was saved the lways serious shock of a painful opera- on, and in many cases the result was erfectly successful,

The operation consisted in passing into e bladder a long, bougie-shaped instru- ent, which, at the will of the surgeon, xpanded into three or more limbs, like he opening wires with which corks are rawn from a bottle. The operator, having lt about the bladder for the stone, pened his instrument by a spring, and rasped the calculus between its blades, hen, by a screw at the extremity, secured in these iron fingers; he next passed a ery fine, needle-like drill down the hol- ow centre of the instrument, till the harp-pointed stillet, armed with a screw, as brought in contact with the imprisoned tone, through which, by means of a lever andle, it was eventually drilled. The crew was then withdrawn, a greater pres- ure put on the blades of the instrument, eneath which the perforated calculus sually broke down, either into masses r into powder. If the fragments are too arge to be brought out in the instrument, r passed naturally, each piece must be aught, and treated precisely in the same way, till sufficiently comminuted to be xpelled with the contents of the bladder. Such operations were seldom completed at one time, the patient, for several reasons, being allowed a few days' interval between each stage of this tardy and but slightly painful operation.

LITMUS.—A blue or purple pigment or colouring matter, obtained from the *Lichen orcilla*, and known in its liquid form as archil. From its extreme susceptibility to acids, chemists use paper soaked in a watery solution of the litmus, and then dried, to test various substances for the presence of acid, the existence of free acid being instantly certified by the blue litmus paper becoming of a bright red.

LIVER, THE.—This is the largest gland in the body, and is divided into three lobes and two appendages, and lies across the abdomen, extending from the right hypochondriac region, over the epigastric, into the left hypochondriac region.

The liver consists of a multiplicity of minute glands or lobules, each lobule consisting of a ramification of an artery, vein, and duct, bound together by what anatomists call parenchyma, or a kind of cellular tissue. Each lobule, though not larger than a grain of sago, is a distinct secreting organ, the liver consisting of vast numbers of these minute points bound into one homogeneous whole, which is divided into the larger and smaller lobe, and the *lobulus spigelii*, and its two prolongations, named the *lobulus caudatus* and the *lobulus quadratus*.

The function which the liver performs is one of the most important in nature, viz., the secretion of bile. In all the other organs of the system the secretion is elaborated from arterial blood; in the case of the bile, however, the process is different, for that fluid is secreted from the impure or venous blood brought from the bowels, mesentery, and digestive organs, and carried to the liver by the *vena portæ*, or vein of the gate, being distributed into every lobe and minute lobule of the organ, where the bile there secreted from the impure blood, and collected by the biliary ducts from all parts, is eventually carried to the gall-bladder, from whence, at the proper time, it is conveyed to the duodenum, to separate the chyle from the chyme. The liver is nourished as an independent organ by a special vessel from the aorta—the hepatic artery, its refuse blood being carried to the *vena cava ascendens* by the hepatic vein.

The liver is liable to several complaints and complicated diseases, such as acute and chronic inflammation, congestion, suppuration in one or several places, and an almost total cessation of the action of the organ.

LIVER, INFLAMMATION OF.—This acute form of disease is characterized by the following

Symptoms.—Extreme pain in the right side, increased on pressure, the pain extending over the abdomen and into the chest, causing difficulty of breathing, dry cough, sympathetic pain in the right shoulder when the right lobe is chiefly affected, and in the left shoulder when the lesser or left lobe is the principal seat of the disease. The whites of the eyes are yellow, the urine high coloured, the bowels confined, and the tongue furred; the pulse at the same time is quick, full, and sharp, or round and full. There is also thirst, heat, and restlessness, with the usual febrile symptoms. Acute inflammation of the liver either terminates in resolution, in suppuration, chronic inflammation, or in an impaired action of the organ.

Treatment.—This consists in general and local bleeding, and the warm bath; calomel and antimony combined in pills or powders, and saline purgatives to carry off the contents of the bowels. These active remedies, however, should be confined to the first five or six days, after which time it may be requisite to employ counter-irritation, such as cupping, blisters, or stimulating applications over the seat of the disease. These means are to be followed up by alterative doses of calomel, dandelion tea, and bitter tonics as a regimen, to which, in the convalescent stage, the mineral acids, and, if necessary, quinine are to be added. Should suppuration take place, the abscess, if pointing externally, is to be encouraged by hot fomentations or poultices.

LIVER, CHRONIC INFLAMMATION OF.—The **treatment** in this form of the disease consists in the exhibition of mercury in small alterative doses internally, the use of it externally as a plaster, or the employment of the following ointment rubbed in over the region of the liver every night for several times in succession, intermitting for a few nights, and then returning to the use of the ointment. Take of—

Camphor	1 drachm.
Tartar emetic . . .	10 grains.
Strong mercurial ointment	2 drachms.
Spermaceti ointment .	6 drachms.

Mix.

As a tonic and stimulant, the hydriodate of potass, or the proto-ioduret of mercury, is to be given in mixture every four hours, as below. Take of—

Hydriodate of potass .	1 drachm.
Mint water	7 ounces.
Tincture of colombo .	4 drachms.
Syrup of saffron . . .	2 drachms.

Mix: one tablespoonful to be taken every four or six hours.

Or iodine, camphor, and mercury may be combined in an ointment, and rubbed into the liver every night. The usual bitter tonics are to be employed to give tone to the stomach and system, and where mercury is inadmissible, the mineral acids should be taken in combination with them.

Electricity is often of the most signal benefit in chronic affections of the liver, either by isolating the patient, and drawing sparks from the affected part, or what is still better, by wearing for some time one of Pulvermacher's medico-galvanic belts, particularly as a stimulant between the application of the ointments prescribed.

A diseased or obstructed liver more frequently results in, or is the remote cause of, dropsy than any other form of disease; hence the necessity, in all such complaints, of paying early attention to the state of the liver. One of the most useful remedial means in all conditions of diseased liver is the dandelion, or *taraxacum*, whether given in the form of a plain infusion or decoction, or combined with liquorice root and powdered nitre, or the fresh root eaten as a salad. In any form or mode of taking, dandelion is one of the most efficacious medicines that can be given in all biliary affections, especially when accompanied with blue pill, grey powder, Plummer's pill, or some other form of mercurial alterative.

The Cheltenham and Bath waters are particularly celebrated for their efficacy in restoring the invalid to health who has suffered from diseased liver. See **Biliousness.**

LIVIDITY.—A discoloured appearance of the skin, either the result of external violence or of internal disease. When caused by external means, the lividity is called *ecchymosis*. When the result of drowning, or of venous or impure blood getting into the circulation, inducing a lividity round the eyes, lips, and on the fingers, the discoloration is called *asphyxia*.

LIXIVIUM.—A lye made of wood ashes, or the salts of tartar; a strong alkaline solution.

E.—A portion of a gland, as the
f the lungs, liver, and thyroid
A name also applied to the lower
the cartilage of the ear, the in-
portion of the helix, the part
pierced for earrings.

ELIA INFLATA.—A species of
, native to India, and now some-
argely admitted into the practice
sic, and much employed by the
opathists. The lobelia belongs to
tural order of *Lobeliaceæ*, and acts
system as a sedative, antispas-
diaphoretic, expectorant, and
acting in an over-dose as a nar-
ison. The *Lobelia inflata* has been
fully employed in cramps and
, and as a laxative to the muscular
cases of incarcerated hernia, or
lated rupture.

LOBELIA INFLATA.

preparations of this plant most
ly used are the tincture of the
infusion, powder, syrup, and ex-
The dose of the tincture is from
drops; of the infusion, from 1 to
poonfuls; from 3 to 10 grains of
vder, gradually increased; while
e of the extract is from 1 grain
d to 3 grains once a day.

ELIA SYPHILITICA.—Another
of the same family, and, like the
native of America, where, from a
its efficacy in *lues venerea*, it
l its cognomen of syphilitica; but besides exercising a strong action on the bladder, bowels, and stomach, as an emetic, purgative, and diuretic, it has been found unworthy of any claim as an antisyphilitic.

LOCATILLI, BALSAM OF.—A disgusting compound, made of wax, lard, rosin, and turpentine, of the consistency of an electuary, and, some half century ago, swallowed by tablespoonfuls by persons gifted with stomachs stronger than their judgment or good taste. The nostrum has been very properly exploded for many years.

LOCHIA.—A term used in midwifery to express the natural discharge from the uterus which follows the birth of the child and after-birth, and continues for a period varying from seven to twenty-one days. See WOMB.

LOCKED JAW.—*Tetanus*, or *rigid spasm*, and sometimes called, from one of the symptoms, that of clashing the teeth, *trismus*.

Though *trismus*, or locked jaw, is one of the features of that frightful convulsive disease known as tetanus (where the body is sometimes bent backwards, or to either side, till it assumes the shape of a drawn bow, the bones occasionally broken under the contractile force of the muscles, and the suffering of the patient intense), it frequently happens that the local symptoms affecting the head and neck, resulting in locked jaw, take place without the general constitutional convulsion. It is to this form, or *trismus*, that we shall, for the present, confine our remarks.

The CAUSES inducing this generally fatal malady are often some local injury, such as rusty nails running into the hands or feet, bites, lacerations of the nerves from foul instruments, wounds received in dissection, and in war from the long exposure of the wounded to wet and cold.

SYMPTOMS. — These commence with pain along the course of some nerve or muscle, producing hardness and rigidity of the muscles of the chest, neck, and throat, accompanied with great difficulty of swallowing. As the disease advances, the pain and rigidity involves the chest, extends to the back and shoulders; the muscles of the face are soon afterwards thrown into violent action, and the jaws clash on whatever is placed in the mouth, and soon after become so completely closed that no artificial means can separate them; the eyes protrude, the skin of the face becomes pale and corrugated, the nostrils stand stiffly out, the angles of the mouth are puckered and drawn forcibly in, giving a ghastly and half-sardonic grin to the countenance; the breathing is short and laboured, and the patient endures terrible suffering. During all the time, however severely his body may be racked by pain, the patient's faculties remain clear and undisturbed.

Treatment.—To reduce the spasm as quickly as possible is the first and most important consideration. To effect this, drachm doses of laudanum should be poured down the throat while the jaws are apart; the body placed up to the throat in a hot bath; an injection of warm gruel, tincture of assafœtida, and turpentine thrown in quantity up the bowels; and, finally, the whole spinal column rubbed with a strong embrocation of oil of amber, turpentine, ammonia, and camphorated oil; long strips of brown paper are then to be laid along the wet spine, and a hot flat iron passed a few times hastily over the paper, so as to drive the embrocation into the nervous centre by the heat of the iron.

If the jaws have become early locked, one or two of the front teeth must be drawn out by the claw of the tooth-key, the tube of the stomach-pump passed down the gullet, and the laudanum—or laudanum, gruel, and ammonia—pumped into the stomach. Should there be no convenience for a hot bath, one or more blankets can be soaked in very hot water, hastily wrung out, and the patient, previously stripped, instantly enveloped in both, laid in bed, and covered over with extra clothes.

Chloroform promises to be the best remedy to reduce the spasms and relieve the patient of his suffering, and should be properly administered by a medical man as soon as possible. Another remedy much recommended for this disease is Indian hemp. See Tetanus.

LOGWOOD.—This well-known dye-stuff is the wood or chips of an immense forest tree, growing in great profusion in Central America, the tree deriving one of its names from the province in which it abounds—Campechy, *Hæmatoxylon Campechianum*. The logwood is only used in medicine for its astringent properties, and to impart colour to a few mixtures. The preparations of this wood found in the Pharmacopœia are the chips and the extract.

The decoction is the usual form in which the wood is employed, the dose being from a few teaspoonfuls for children to a wineglassful for adults, in cases of diarrhœa and other relaxed conditions of the bowels. The extract is either given in pills or powders for the same diseases, and in spitting of blood is prescribed alone, or with kino, in doses of from 5 to 20 grains.

LONGING.—A vulgar expression applied to pregnant women, when, from the state of the system, and an impaired appetite, they express a preference for certain articles that some innate feeling teaches them would be beneficial or of service to their state of health. As it is seldom that those desires are irrational or injurious, such solicitations, when they occur, which is by no means often, should, if possible, be always complied with, for so active is the imagination of the female at such times, and so extraordinary the sympathy between the feelings of the mother and the nervous system of her unborn child, that a wilful rejection of her desires, or a rude exposure of her wishes, may result in an injury or disfigurement to the infant. On this subject see Pregnancy, and Mother's Marks.

LONGISSIMUS DORSI.—The name of a long muscle which runs down the spine of the back, and assists in the drawing up of the trunk.

LONGITUDINAL SINUSES.—The name of two channels formed by folds of the *dura mater* in the skull, which serve the purpose of veins in the delicate structure of the brain, as well as assisting to support the lobes, and prevent an undue pressure upon any part of that organ.

LONGUS COLLI.—A long, thin muscle of the neck, serving to bend the head.

LOTION.—A medical preparation, used as an outward application to reduce the heat in an inflamed part, or to stimulate some indolent sore or unhealthy ulcer. Collyriums, or eye-waters, are also included under the name of lotion. Lotions are of various kinds, such as refrigerating, sedative, stimulating, astringent, or evaporating, according to the effect they are employed to produce.

Refrigerating or cooling lotions are made either with sal ammoniac and cold water, or iced water, and may be dropped in a continuous stream on the part, or else applied on cloths wetted in the liquid used.

Sedative lotions are prepared by rubbing down opium in cold water, or using a strong decoction of poppyheads either warm or cold.

Stimulating lotions may be made by adding to half a pint of camphor water

f spirits of wine, or 3 grains of
f copper to 1 ounce of water.

nt lotions are prepared by dis-
grains of white vitriol, and the
itity of sugar of lead, in 8 ounces
or by dissolving 1 drachm of
1 drachm of sugar of lead, in a
ld water.

ating lotions may be made by
2 drachms of sal ammoniac in
camphor water, and adding 1
pirits of sulphuric ether.

GE.—A warm, aromatic gar-
belonging to the Natural order
ræ; formerly used as a carmi-
cases of flatulent hysteria, but
st unknown as a medicine to
ers.

SPIRITS. See Vapours.

NGES.—An agreeable form of
in which either the powder of
ir essential oils, or balsams, are
o a confection with powdered
p sugar, and some colouring
hen rolled into cakes, stamped
hapes, either oval, round, square,
d, and baked over a stove fire.
he drugs used merely impart a
the lozenge, the quantity being
to exercise any beneficial effect.
ain, are both strong in quantity
mely efficacious; of these are
n, ipecacuanha, tolu, cayenne,
l peppermint.

y speak here of medical lozenges,
hich may be relied on to pro-
effect for which they are taken.
expectorants for coughs, colds,
hroats, the opium, ipecacuanha,
l, and cayenne, will, if taken in
ne, three or four times a day,
serviceable; while for flatulence,
igestion, the ginger and pepper-
nges will be found to be equally

VENEREA.—A fanciful name,
he sixteenth century to syphilis.
V.

AGO.—This extremely painful
an acute form of muscular
m, attacking the mass of muscles
n the loins, often compelling the
walk on crutches from the pain
im to raise his body, or throw
ted muscles into action. Like
he pain is augmented by the
f the bed, and by every motion,
its affecting the adjacent organs
lder and kidneys by sympathetic
mbago has been supposed to be
inct affection of those parts.

Treatment.—In the acute or early days of the disease, the first measure adopted should be to give the patient a warm bath, using the flesh-brush freely while in the water. He should be then placed in bed, and the following powders and mixture regularly administered. Take of—

Dover's powder	30 grains.
Calomel	12 grains.
Antimonial powder	9 grains.

Mix, and divide into six powders; one to be given every four hours.

Take of—

Spirits of mindererus	2 ounces.
Ipecacuanha wine	3 drachms.
Spirits of nitre	2 drachms.
Wine of colchicum	2 drachms.
Syrup of saffron	1 drachm.
Camphor mixture	3 ounces.

Make a 6-ounce mixture: take two tablespoonfuls one hour after every powder.

Should the bowels be confined, a black draught, or a dose of castor oil, should be taken after completing the first packet of powders and the mixture.

Should the pain in the loins continue excessive after the bath, and the first eight hours under the effect of the medicine, the cupping-glasses should be applied on each side of the spine, in the hollow above the hips, and about eight ounces of blood extracted; or else six leeches should be placed along each side of the spine, and the bleeding, in either case, encouraged by folded flannels wrung out of hot water.

As the pain subsides, the Dover's powder may be given *without* the calomel, the mixture continued, and every fourth day an aperient powder, draught, or dose of pills given to prevent the opium affecting the head. Some medical men apply an opium or belladonna plaster to the back when the pain is obstinate, but a more certain and speedy benefit will be obtained by passing a 6-grain suppository of opium into the rectum at bedtime.

Care must be take, when convalescent, that the loins are well protected from cold or damp by a flannel bandage being worn for some time.

When the lumbago becomes chronic, the treatment should commence with the warm hip-bath, which should be repeated at bedtime two or three times a week. The hips are then to be rubbed dry with a rough towel for some minutes, so as to excite the vessels of the cuticle, when the following embrocation is to be freely applied for at least five minutes; a sheet of brown paper is then to be laid on the wet back, and a flat iron, moderately heated, passed over it for a few seconds, or till the heat becomes unpleasant.

Embrocation.—Take of—

Camphorated oil . .	2 ounces.
Oil of amber	½ ounce.
Turpentine	6 drachms.
Spirits of hartshorn .	6 drachms.

Mix.

The following mixture is to be used through the daytime as directed, and when the nights are restless and the patient has unrefreshing sleep, a 10-grain Dover's powder should be given about nine o'clock every evening.

Mixture.—Take of the

Compound tincture of guaiacum	1 ounce.
Mucilage	½ ounce.
Simple syrup . . .	½ ounce.
Spirits of nitre . . .	6 drachms.
Spirits of juniper . .	½ ounce.
Cinnamon water	enough to

make a 6-ounce mixture.

Two tablespoonfuls to be taken every four hours during the day. If the embrocation fails to effect the relief which should result from its use, it may be suspended, and either a blister applied, or a poultice, made by mixing two parts of flour with one of mustard, laid warm on the back, and retained for half an hour. Whether the latter—the counter-irritant—is employed, or the blister, must depend entirely on the pain endured, and the probable effect the treatment may produce. In general, however, it is not necessary to resort to the blister. In long-standing lumbago, great benefit will be experienced from electricity, particularly the medical form of it afforded by wearing one of Pulvermacher's belts or electric chains. In extreme and very obstinate cases, the operation known as acupuncture has been attended with the most gratifying results.

LUMBAR ABSCESS.—One of the largest and most serious collections of matter to which the body is liable. Lumbar, sometimes called *psoas abscess*, is a collection of pus formed in the lumbar region of the abdomen, adjoining the spine, which, burrowing under the psoas muscle, after a long period of exhaustion and suffering, at length points at the groin, where, when opened, an immense amount of matter is occasionally discharged. See Psoas Abscess.

LUMBAR REGION.—By this term anatomists signify all the space defined by the five lumbar vertebræ, or what is popularly known as the loins; a space bounded above by the twelfth dorsal vertebra, below by the first bone of the sacrum, and embracing the lumbar portion of the spine, with the muscles internal and external, and the integuments of the part.

LUMBRICI.—The name of a species of long round worm, found infesting the intestines of children. See Worms.

LUMBUS.—The loins.

LUNACY. See Madness.

LUNAR CAUSTIC.—An old name for the nitrate of silver. See Silver.

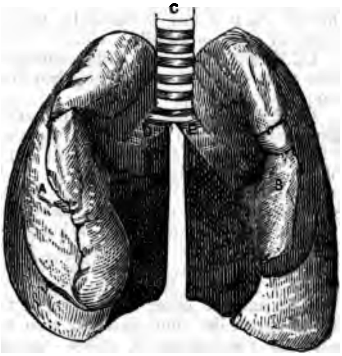
LUNCHEON.—A supplementary meal, principally indulged in by those who dine late; and to such persons as are compelled to postpone the chief repast till it supersedes tea, a luncheon becomes an absolute necessity; but the man who has the means and opportunity to live naturally, and is determined to preserve his health and digestive powers as long as possible, will make it a rule to avoid such a system of irregular feeding, and remember that the middle of the day, when the wear and tear of the frame is the greatest, and the physical exhaustion demands repletion, is the proper and natural period for the chief meal to be taken—chief in quantity and in the nutritious and animalizing nature of the food taken. See Food, and Meals.

LUNGS.—It would be difficult to say which organ of the body displays the most wonderful skill and wisdom in its construction; but in point of vital priority, the lungs unquestionably stand foremost, though so closely followed by the heart, that it is a mere difference of a second or two of time in their relative importance.

The lungs are a light, elastic, spongy organ, of a greyish-pink colour, convex above, or anteriorly, filling up two-thirds of the entire cavity of the chest or thorax, and in a measure overlapping the heart, which occupies a portion of the left side of the space of the chest.

The lungs consist of a vast number of air-cells, the terminal extremities of the minutely divided bronchial tubes, arteries, and veins, the whole multiplicity of these air-cells and vessels being bound together by a peculiar tissue called the *parenchyma*. The lungs, thus consisting of a vast aggregate of minute cells bound into one perfect organ, are further divided by anatomists into the right and left lung: the right, which is the larger, consisting of three lobes; and the left, on account of the heart lying on that side, into two lobes.

The lungs extend from the top of the chest, or immediately below the collar-ones, as far down as between the fifth and ixth ribs, in front touching the diaphragm, r midriff, but in consequence of the posiion of that muscle, descending still farier behind, and terminating in a thin argin. Externally, the lungs are everyhere lined, with the heart and all the essels contained in the chest—like the rgans in the abdomen,—by a *serous* embrane, called the *pleura;* the object f this investing membrane is to allow a ee and easy motion to the lungs in their avity, a result which but for this provion they would not obtain. Internally, rough every bronchial vessel and air-cell, e lungs are lined with a delicate *mucous* embrane, a continuation of the lining ssue of the mouth and fauces. The achea, or windpipe, terminates shortly fter entering the thorax, in two branches, lled the right and left *bronchial tube,* one roceeding to each lung, as shown in our t. The right bronchial tube divides nto three branches,—one to each lobe; e left into two, for the two lobes of the ft lung. Each branch on entering its llotted lobe immediately *bifurcates,* or ivides into two, and continues in this anner splitting into forks, diminishing n size as they proceed, till they are reuced into tubes of the most minute alibre, finally terminating in small cells ined with the mucous membrane that as accompanied the trachea and bronhial tubes, and here terminates in an xpansive air-cell. The pulmonary artery, s described under Heart (which see), aving left the right ventricle, divides into wo branches, one to each lung, and exactly n the same manner as the bronchial tubes ivided, diminished in size, and subivided, the pulmonary branches running eside the bronchial tubes split, till the enous blood, carried by them, is poured ut in close contact with the lining memrane of the air-cells, where, at every inpiration, the blood absorbs through this ne tissue the oxygen from the air, hanging its colour to a bright scarlet. Rising from the opposite extremity of hese cells by minute vessels, commence he pulmonary veins, *increasing* in size xactly in the same manner that the bronhial tubes and the pulmonary arteries *decreased,* till two large branches from each ung terminate in the left auricle, thus ompleting the first circle of the blood; nd for the impure stream the pulmonary rteries took to the lungs, the pulmonary eins bring back to the heart the pure rterial blood—the life of the body. See HEART. The lungs are thus made up of bronchial tubes, vessels, and air-cells, and of the ramifications of the pulmonary artery and vein, with the membrane, or *parenchyma,* that binds the whole together. See RESPIRATION.



THE LUNGS.

A, B. Right and left Lung.
C. Trachea, or Windpipe.
D, E. Right and left Bronchial Tube.

The lungs in adult age weigh about 40 ounces, and are calculated to have, with their cells and tubes, a surface of thirty times that of the body.

The lungs before birth or breathing are of compact feel, dark grey colour, lie in a small compass in the chest, and *sink* if put into water; but the moment the first inspiration has taken place they expand, fill every available line of the cavity, have a crackling, elastic feel, a pink colour, and *float* if immersed in water. See INFANTICIDE.

For the diseases of the lungs and respiratory organs, see BRONCHITIS, PNEUMONIA, PLEURISY, CONSUMPTION, &c.

LUNGWORT.—A gummy, slightly astringent herb, so called because, in the days when the Pharmacopœia consisted entirely of simples, this plant was supposed to exercise some beneficial influence on the lungs in disease. It has, however, been long out of use.

LUPUS.—The name given to a peculiar and malignant skin disease which attacks the wings of the nose, the lips, and other parts of the face, slowly eating away the part by a spreading ulcer called *lupus,* or the wolf, from its chief characteristic, the eating ulcer. See SKIN, DISEASES OF.

LUTE.—A paste made with barley-meal, linseed-meal, or almond-meal, and water, and used by chemists to surround the necks of bottles, or the point of junction between the retort and receiver; or any chemical apparatus to exclude air, and prevent the escape of the contents. A firmer kind of lute is made by mixing pipeclay and linseed oil.

LUXATION.—The displacement of one or more bones of a joint. See DISLOCATION.

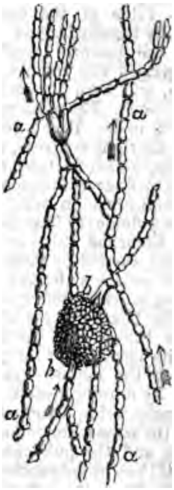
LYMPH.—A thin, pure, and colourless fluid, circulating in the body in a system of vessels specially adapted for this limpid fluid—the lymphatics.

Lymph chemically consists of fibrine, albumen, chloride of sodium, phosphate of lime and magnesia, and carbonate of soda. Though the term lymph should be properly confined to the fluid carried by the lymphatics, it is often applied by medical men to other exudations of the body; thus the fluid inserted into the arm in vaccination is called Vaccine Lymph, which see.

LYMPHATICS.—A system of minute vessels, whose special duty it is to collect from every part of the body the *débris* or waste of the circulation—the worn-out material, whether solid or fluid—and convey it to one common centre in the abdomen, where, that nothing may be lost that can again be converted into use, it is carried to the *receptaculum chyli*, and there mixing with that nutritive principle, it proceeds along the thoracic duct to the heart, to be converted into new arterial blood. The lymphatics of the head and neck, instead of passing through the thoracic duct, enter the right side of the heart directly.

The lymphatics, like the lacteals, are composed of two coats—an outer, which resembles the external covering of the veins; and an internal coat, which is dense, smooth, and polished. Some anatomists have described a third or middle tunic, of a character analogous to the muscular coat of the arteries; this, however, is now generally disallowed. The internal coat of the lymphatics is firm and strong, and thrown into crescentric folds, which, hanging down as in the veins, perform the office of valves, and prevent the return of the lymphatic fluid. These valves and folds occur so frequently as to impart a singularly knotty appearance to every vessel of the system. The chief external peculiarity of the lacteal and lymphatic vessels consists in the uniformity of the size of every When an artery sends off a branch main trunk diminishes in proportion when a vein receives a branch, its t is proportionally enlarged; but wh one or two lymphatics are added t main channel, there is no differen size. The lymphatics arise by m orifices from every part of the bo from the lining membrane of the abdo from the lining membrane of the l and chest, from the investing memb of the brain, from the mucous su lining the mouth, gullet, stomach, windpipe. They rise also from all organs of the body,—brain, liver, kid &c.; from the surface of muscles, the bones, and from every part of skin, and wherever bloodvessels circ Like the veins, lymphatics are di into two systems—the superficial an deep-seated,—each system repea inosculating or uniting with each o On the way from their origin to place of termination in the thoracic the lymphatic vessels pass throug number of oblong bodies, called absor glands. See ABSORPTION.

The following cut shows the shape



LYMPHATICS.
a, a, a, a. Lymphatic entering and leavi
b, b, an Absorbent Gland.

course of the lymphatic vessels, with knotted appearance made by the crescen folds of the inner tunic, and represent the manner of entering and leaving an absorbent gland.

LYTTÆ.—Spanish flies. See CANTHARIDES.

M

M is the thirteenth letter of the alphabet, and, as an abbreviation, is a letter very frequently used in medicine. As a numeral, M stands for *mille*, a thousand (1,000); and, with a dash over it ($\overline{M}$), for 10,000. It also stands for *magister*, master; as M.A., *magister artium* (master of arts); M.D., *medicinæ doctor* (doctor of medicine); A.M., *anno mundi* (in the year of the world). M also stands for midday, or noon,—A.M. and P.M., *ante meridiem* and *post meridiem* (before noon and after noon). In prescriptions, M stands for *mistura*, a mixture; M., *misce* (mix); M., *manipulus* (a handful), when any inert or common article is prescribed. M also stands for *mitte*, send; as thus: *mitte hirudines viij*, send eight leeches.

MACCARONI.—The name of a well-known Italian food, made of the best wheaten flour and eggs, and formed into long, pipe-shaped lengths, about the size of a quill, and which is eaten very largely on the Continent, and of late years has been very much used in this country, especially among invalids, for whom it forms a highly nutritious aliment, particularly when eaten with boiled milk and soups. As, however, the orthodox mode of serving it with milk and grated cheese rather demands a healthy than a debilitated stomach, it should be therefore carefully avoided by the invalid. See VERMICELLI.

MACE.—A well-known spice, forming the inner envelope of the growing nutmeg. When the capsule of the nutmeg bursts—which it does, like the husk of a filbert, when the fruit is nearly ripe—it discloses a bright scarlet network, investing the whole nut in a thin, fibrous membrane. This inner coat or tunic is the mace, which is eventually peeled off and dried, when it loses its bright colour, and becomes of a reddish yellow. The mace is regarded as the most choice of all the spices, and accordingly always realizes a high price. It contains a very large proportion of essential oil, on account of which mace is never employed alone in medicine, though in its properties possessing the usual carminative character of other spices. See SPICE.

MACERATION.—The digestion of any substance for a certain time in cold water. A term used in pharmacy.

MADDER.—The *tinctora rubia* of the Pharmacopœia. This dye-stuff, so extensively cultivated in France and Germany for its colouring properties, though once used as an emmenagogue, is now never prescribed by medical men except as an experiment, to show how inveterate are its colouring properties, dyeing all the secretions, the muscles, and even the bones, of a deep red colour, after only a few hours' use.

MADNESS OR MANIA; INSANITY OR LUNACY.—Names expressive of an unsound state of mind, or a disordered intellect. There are two conditions of madness, or stages in this mental disorder; one characterized by violent and unrestrained behaviour, and an irritability which drives the patient to commit the most wild and often grotesque and extravagant actions, and, when opposed in his headstrong fancies and impressions, causing him to perpetrate acts of the most violent and vindictive nature. It is to this condition of mental aberration that the term *mania* is properly applied, or the sthenic form of insanity. In the other form or stage, all the outward expressions are of a sad or desponding character, attended with a loathing or disgust of life, a weariness of all subjects, and a settled despair, with frequent attempts, either openly or covertly made, to shake off a life which is regarded as an intolerable burden; in other words, to rid himself by his own hands of what he regards as a hateful existence. This condition is called *melancholia*, or the low asthenic form of insanity.

Though there are many forms and varieties of brain affections, according to the locality and specialities of the attack, mental derangement is usually divided into the above two primary conditions of *mania* and *melancholia*, or raving and melancholy madness.

It has generally been supposed that madness is a disease or perversion of the intellectual or reasoning faculties; this, however, has been proved to be a mistake, for cases frequently arise where the mental illness is confined to a diseased perversion of the moral affections exclusively, with little or no apparent injury of the intellectual faculties.

Whether the disease assumes the form

of *mania* or *melancholia* depends more on the constitutional characteristics of the patient than on the nature or severity of the immediately exciting cause.

It is quite unnecessary, in such a work as this, to enter at length on a subject of such importance as the one embraced in the sanity or sickness of the human mind, especially when it is remembered that the knowledge forms an entirely distinct branch of practice, requiring many years of close study and observation to give the practitioner any claim to respect or confidence in this branch of the profession; while, to make the subject still more difficult, there are almost as many theories or opposite views entertained on mental derangement as there are practitioners of madness. We shall, therefore, confine ourselves to a few general facts and principles connected with mental disease, for the guidance of those who may desire to consult the subject, till the patient can be removed into the care of those whose medical education has specially fitted them for so responsible a duty.

Madness frequently terminates in melancholy, which, in its turn, may degenerate into chronic or incurable derangement, or *fatuity*, a condition which assumes innumerable forms. Intellectual aberration, as a diseased state of the reasoning faculties is sometimes called, may be general or only partial, when, according to the extent of the disease, the affection is called *monomania*, or madness on one point, or respecting one set of ideas; *kleptomania*, when a person, placed by fortune above all need or reason of temptation, pilfers articles for which he or she can have no possible occasion.

Another form of madness is characterized by a perpetual restlessness, with a partial loss of that sensibility to external objects which constitutes the harmony of physical life; a neglect of all moral restraint, causing the patient to commit acts which exclude him from society, or prompting him to acts of extravagant folly, or to give expression to a rapid flow of unconnected ideas: this condition is called *dementia*, or incoherent madness.

The basis of nearly all the forms of madness is some strong and rooted impression or delusion in the patient's mind, always erroneous, sometimes harmless, but often leading to such violent opposition as to compel the confinement of the patient, and to save injury to himself and others by the restrictions of a strait-waistcoat.

The CAUSES which lead to madness are either moral or physical; and when both exist together, the first becomes the remote, the latter the immediate and exciting cause.

MORAL CAUSES.—These are love, fear, sudden and great fright, religious despondency, ambition, reverse of fortune, and domestic unhappiness, which last may be regarded as one of the most frequent of all sources of mental aberration.

PHYSICAL CAUSES.—These are, in the first place, organic and functional, or symptomatic. When induced by organic causes, the madness may result from some injury suffered on the head from blows, falls, concussion, or effusion, as in apoplexy, either inducing a *lesion*, affecting the whole or only a part of the brain, or indirectly acting on the great nervous centres. When functional, or symptomatic, the brain is affected indirectly, as in cases of worms in children, leading to *hydrocephalus*, or water on the head; and when in typhus and other fevers, *mania* is induced from the general shock to the nervous system by the severity of the inflammatory action, or the exhausting nature of the malady.

GENERAL SYMPTOMS. — A peculiar character of the face, giving it either a square and flat, or sharp, piercing expression; a remarkable appearance of the eyes, which are often protruded, and have a wild, restless look; great agitation of the facial muscles, and sometimes of the entire body; indifference to heat or cold, or any vicissitude of temperature; and an extraordinary insusceptibility to contagious diseases. The stomach and bowels—indeed, all the functions of the body—are either not at all or only very partially influenced by those causes which in health would have been certain to affect them; hence the torpidity of the bowels, their obstinate constipation, the scanty and high-coloured urine, and the insensibility of the stomach. There is an absence of tranquillity and repose; disinclination to sleep; excessive and boisterous animal spirits; erroneous impressions, or a faulty imagination; incessant talking, singing, or fitful bursts of laughter; crowing, shouting, or discordant noises; the conversations are often gross, and the gestures and actions offensive or obscene; the whole external character and functional actions of the patient being indicative of a high state of nervous tension and excitement.

Sometimes, however, there are clear

vidences that the individual suffers cutely, either in the brain, lungs, or bdominal viscera, shown by the abrupt essation of his talking or his hilarity, or y his sharp exclamations of pain, by the eating of his head, breast, or stomach ith his open hands or clenched fists. hese manifestations are accompanied y evacuations, by the high colour and antiness of the water, a dry, hot skin, r a cuticle cold and harsh to the feel; t other times a clammy perspiration edews the body, the breath is hot and etid, and the respiration hard and boured.

In countries where there is little political ivalry or social contention—where there re few commercial speculations, or great nducements held out to stimulate amition—the proportion of cases of mania s compared with the population is extremely small; thus, in Italy, Russia, nd Egypt, where the people are content ith their lot, and, like children, satisfied ith the government given to them, the um of insanity ranges very low.

In Great Britain, however, the case is ery different, and there can be no question ut that insanity, in one or other of its orms, is fearfully on the increase. We ay blink the fact, and strive to suppress he truth so palpably apparent, but the vidence of the assertion will be heard, nd leaves no loophole for incertitude or loubt.

That the go-ahead and "fast" practices f the times—the emulous struggle to btain position and fortune, and realize n a few years the independence which he former generation devoted a lifetime o acquire—is exercising a fearful influence n the health and stamina of the intellect f this country is a fact beyond all dispute. It is impossible that the brain and nervous ystem can be kept on the stretch for so many years with impunity, more particularly when it is remembered how rtificially the man of business generally lives;—the breakfast hurried, the mid-day meal postponed for a fashionable repast at tea-time, to which, frequently without appetite or desire, the merchant or professional sits down, endeavouring to obtain from variety or wine the stamina which a substantial meal can alone impart.

The TREATMENT of insanity or madness consists of two distinct systems—the moral and the physical; or that of remedies applied to the mind, and agents given to the body. The spread of knowledge, and the advance of a higher order of Christian philanthropy, has, within the last half century, done much in the way of alleviating the sufferings of the insane, and inculcating a wiser and more humane system of treatment; but though the whip, chains, and straw—the practice in vogue in the days of Hogarth—have long since disappeared, and the demoralizing custom of making an exhibition of the mental misery of the insane — as so graphically depicted by that great painter has been abolished,—and humanity, as a general rule, now presides over the mentally afflicted, there is still much to be achieved before the management of the insane becomes all that reason and humanity would have it.

MAGISTERY. — A term formerly employed by the chemists to denote any preparation supposed to contain special virtues. A precipitate. The word is sometimes met with still, as in the magistery of bismuth, the sub-nitrate of that metal being the article indicated by the name.

MAGNESIA.—The name of one of the pure earths, having, like lime, a metallic basis, called *magnesium*.

By some authors the name of this useful drug is supposed to be derived from *magnes*, a magnet or loadstone, from the belief that this earth has the property of attracting some quality from the atmosphere. The name, however, was more probably derived from the city or district of Magnesia, in Asia Minor, over which Xerxes made the exiled Themistocles governor, this earth, in all probability, having been first discovered in that neighbourhood, or the Magnesia in Thrace.

Three centuries ago magnesia, under the name of Count Palma's Powder, was sold in Italy as a specific for many diseases, and being greatly believed in, formed a most lucrative business to the Roman clergy, who long had the exclusive sale of the medicine.

PREPARATIONS AND USES.—There are three forms in which magnesia is recognized in the Pharmacopœia—that of the carbonate, the calcined, and the sulphate, or the cathartic salt; the effect they produce on the body being that of an absorbent, an antacid, or anti-acid, and a purgative, according to the preparation employed.

1st. *Carbonate of Magnesia.* — This preparation is found in the shops in three conditions—that of an extremely light, white, and subtle powder; secondly, in square masses, each the size of a brick;

and lastly, in small square pieces. The properties of the article are the same in either of the forms, and as a corrective in heartburn, or acidity of the bowels, each of them forms a valuable remedy, in doses of a teaspoonful dissolved in plain or peppermint water, or from one to two drachms of the lump eaten dry once or twice a day. In the heartburn of pregnant women the latter form will be found very efficacious.

2nd. *The Calcined or Burnt Magnesia.*—This is simply the carbonate put into a retort of a peculiar construction, and a strong heat applied, by which the carbonic acid gas is driven off, and the pure earth or calcined magnesia left. This is considerably heavier than the carbonate, though still preserving its light, impalpable form of powder. Calcined magnesia acts on the system as an absorbent, and slightly as a stomachic, especially when combined with rhubarb, ginger, and colombo. Taken alone as an absorbent, when there is excess of acid in the stomach, the dose is from half a drachm to a drachm or a teaspoonful three or four times a day. It neutralizes the acid in the stomach, and not unfrequently acts afterwards on the bowels as an aperient. This preparation must always be kept in a closely-stoppered bottle, for, if exposed to the air, it attracts the carbonic acid, and in a short time becomes again a carbonate. The bulk of magnesia has been always an objection as regards administering it to children. This objection has of late been obviated by a preparation called the Heavy Magnesia, a dose of which goes into a very small space.

3rd. *The Sulphate of Magnesia.*—A preparation in which magnesia and sulphuric acid are combined, yielding a bitter purgative salt, the *sal catharticum amarum* of the old physicians, who, till the analysis of our mineral waters, and the extraction of the sulphate of magnesia from the Epsom waters, were in the habit of prescribing the chemical preparation. The medicinal properties of sulphate of magnesia, or Epsom salts, in all inflammatory fevers, and as a cooling saline purgative, are not to be surpassed by any salt or drug in the Pharmacopœia, the dose for an adult being from 4 to 8 drachms. A very excellent preparation, called Dinneford's Fluid Magnesia, is now sold as a patent medicine, and possesses the advantage of being as well adapted for children as for adults.

MAGNESIA WATER. — An effervescing antacid and refreshing beverage, now very generally employed as a slight stimulant and tonic when the stomach is out of order.

Magnesia water is prepared by making a strong solution of carbonate of magnesia, and, by means of a forcing pump, charging the solution with carbonic acid gas to saturation, and then corking and wiring the bottles, like soda water.

MAIZE, OR INDIAN CORN. — A kind of grain, belonging to the Natural order of the *Gramineæ*, or grasses.

This highly valuable article of food, a native of tropical climates, but growing abundantly in the south of Europe, possesses—though not exactly in the same degree—all the properties that render our best grains valuable and nutritious, and, when properly ground, and the flour well dressed, and then carefully fermented and baked, makes not only a palatable, but a strong supporting food, and one lighter of digestion than even the best wheaten bread. A prejudice exists against maize flour in this country, where the poorest beggar considers himself ill-used if not served with the finest wheaten bread for his penny. In many parts of Europe it is highly esteemed, and in the United States is extensively cultivated and very largely consumed, and that in many forms, such as hot corn, corn cake, and Oswego arrowroot; a very fine starch,

MAIZE, OR INDIAN CORN.

uch used in America for pies and ddings, being, under that name, ex- acted from the maize flour. See Food.

MALACHIA.—A depraved appetite, iving the person to eat the most loath- me of articles, such as the dirt-eating nong the negroes; the disease called *il d'estomac.*

MALACHITE.—A native copper ore, hydro-carbonate of the peroxide of pper.

MALA PRAXIS. — Bad, faulty, or norant practice. A term usually con- ed to the medical profession, and ployed to express condemnation of a urse of treatment opposed to the teach- gs of the schools, any feasible theory, personal experience; when, in fact, a actitioner violates all the rules of the ofession, and ignorantly prescribes for at he does not understand.

MALARIA. — The exhalation given from swamps, marshes, meres, and nk, undrained fens and bogs, generating, those exposed to them, the marsh fevers, termittents, and agues of Europe; the phus *icterodes*, or yellow fever of the est Indies, and the jungle or remittent vers of the East Indies.

What the Sunderbunds and Pontine arshes are still to Bengal and the Roman ates, the fens of Lincoln and Cam- idgeshire were to England a century o. But owing to the draining that has ken place, and the reclamation of land ich has resulted from it in those coun- s, these formidable diseases of ague and mittent fever have almost ceased to be garded as endemic pests to the country.

MAL DE LA ROSA.—Scarlet fever.

MAL DE SIAM.—Jungle fever.

MAL DEL SOLE.—Elephantiasis.

MAL DES ARDENS.—A pestilential ysipelas.

The above were names formerly given diseases which spread like a pestilence, returned at certain seasons as for- idable epidemics.

MALFORMATION.—Any deviation m the natural formation of the body, ich may either consist in a deficiency a redundancy of parts. The deficiencies sometimes very extraordinary, child- n being occasionally born without hands feet, and even arms and legs; cases ve occurred where the heart itself has en found to be absent; the head, also, very frequently found malformed in a gular manner, and sometimes of such an mense size as to prevent its delivery, less reduced by surgical means.

It would take up too much space to give even a list of the malformations occasionally met with in practice, and would be of little or no use to the reader if given; it will be sufficient if we refer to a few of the most general disfigurements.

Those connected with the spine arise from a deficiency in some part of the column, caused by the absorption of the cartilages or the spinous process of one or more of the vertebral bones, or the entire absence of one of the vertebræ. Such a malformation may occur in the bones of the neck (cervical vertebræ); between the shoulders (dorsal vertebræ); at the loins (the lumbar), or at the bottom of the spinal column (the sacrum), a soft tumour filling up the cavity left; this tumour, on whatever part of the spine formed, is called a *spina bifida*, a disease that may result in a distorted spine, and the elevating of one shoulder higher than the other.

A by no means unfrequent malformation is an imperforated anus, while in both male and female infants the urinary passage may be equally closed; on this account the surgeon should always satisfy himself that both passages are open before yielding up the infant to the nurse, or at least before taking his leave. The malformations resulting from a redundancy or superfluity of parts are most frequently met with in the form of five fingers or toes on either of the hands or feet, a second cartilage to the ear, or a rudimentary hand. Such malformations should be removed as early as possible. The disfigurements arising from moles, warts, and excrescences, will be referred to under Mother's Marks. For the malformations of the feet met with under so many forms of club-foot, modern science has in many instances found a remedy, a great blessing having been conferred on society by the establishment of the Orthopædic Hospital, where all such cases may find relief, if not a cure.

MALIC ACID.—A vegetable acid, which, though found in more or less abundance in most English fruits, is regarded as the special acid of the apple, and is the substance which imparts the distinctive flavour to that fruit.

MALIGNANT.—A name given to certain diseases when they assume a grave and dangerous character, such as the worst form of typhus, or *typhus gravior*, or malignant typhus; *cynanche maligna*, malignant sore throat; and some other diseases.

MALLEOLUS.—A mallet. The name given by anatomists to the ankle, from its fancied resemblance to that implement. The two large bones of the ankle are called the external and internal malleolus.

MALLEUS.—A hammer. One of the chain of three small bones situated in the middle ear, whose vibrations strike on the tympanum, conveying sound to the internal ear. See Ear.

MALLOW SYLVESTRIS.—The field or woody mallow, as the *Althæa* is the marsh-mallow: both species belong to the Natural order *Malvaceæ*. The chief distinction in these two species lies in the first growing in dry situations,—fields, banks, and hedges,—and the second in dank, marshy localities. The medical properties of both are very nearly the same.

The mallow plant abounds in mucilaginous and demulcent properties, and is consequently much esteemed in affections of the urinary passages, and in colds and coughs. Though an ointment and a syrup still keep their place in the Pharmacopœia, it is seldom prescribed in any form but that of decoction, which, either with linseed and nitre, or prunes and raisins, and sweetened to the pleasure of the patient, is used in affections of the kidneys, Bright's disease, or affections of the bladder, as a beverage, to be taken in cupfuls three or four times a day; while in the latter form, boiled down and sweetened into a syrup, it may be given in tablespoonfuls every three or four hours, in any kind of cold or affection of the respiratory organs.

MALT.—Though this term may be applied to any grain in which, by artificial means, the starch has been converted into sugar, the term is strictly confined to barley so prepared.

Malt is used for the purpose of distilling spirits, such as whiskey and alcohol, for the making of malt or fermented liquors, as porter, beer, and ales; and also for the preparations of vinegar. Malt is sometimes used in medicine as a restorative: in cases of extreme nervous debility, when made into a strong infusion, in the form, in fact, of a sweet wort, it is often of great benefit to consumptive patients, while in cases of scurvy such potations are of even greater benefit. These are, however, exceptional cases; it is as the staple of malt liquor that it becomes a therapeutic agent of incalculable value to the working classes of this country, for whom it is better suited as a beverage and a medicine than any other article, not even excepting wine.

Malt liquor, from containing more of the elements of nutrition than any other liquid used for the same purpose, is especially adapted to Englishmen, and more particularly so to those accustomed to out-of-door exercise and much physical exertion; and when their diet is scanty, or deficient in nitrogenous principles, it acts both as a tonic and a stimulant to their over-worked frames.

MAMMA, the breast; MAMMÆ, the breasts.—The two secreting glands which, situated on the front of the thorax, constitute the female bosom, and the organs which supply the infant with nutrition.

It is from the presence of these mammary glands in so many animals, and the fact that all such animals suckle their young, that the order of *Mammals* has been founded. See Breast, Milk, and Nipple.

MAMMILLARY. — Resembling a little breast. A name used by anatomists to describe a small protuberance on the vermiform process of the *cerebellum*, or little brain.

MANAGEMENT OF PATIENTS. See Sick-room.

MANDRAKE, or MANDRAGORA. —A powerfully narcotic plant, once gathered with great solemnity, and esteemed to possess extraordinary powers, not only as a medicine, but as an agent of incantation. From the forked character of its root, and its fancied resemblance to the male form, it was, if gathered with certain mystic rites, and at a fitting conjunction of the planets, supposed to exercise such an influence on the health of the person against whom it was used, that as the root withered so would life wane in the doomed man.

From the most remote ages, this plant seems to have been an object of extreme superstition. As a medicine, however, it was long regarded as the most potent hypnotic, or drug to produce sleep, known in practice, being administered both in decoction and the form of syrup. From the frequency with which Shakspere refers to this article under its official or professional name, it is evident that even so late as the beginning of the seventeenth century it was regarded, like morphia now is, as the most potent narcotic known.

> “——— Not poppy, nor mandragora,
> Nor all the drowsy syrups of the world,
> Shall ever med'cine thee to that sweet sleep
> Which thou ow'dst yesterday.”

MANGANESE.—A mineral somewhat resembling iron, and extensively used in the arts, but not in any form employed as a medicine.

MANGOLD WURTZEL.—A well-known tuberous root: a species of beet, and used chiefly to fatten stock in this country; but on the Continent employed with beet, and other saccharine roots, for the manufacture of sugar. As a food, it possesses many of the properties of the carrot, parsnip, and beet.

MANIA.—Madness, which see.

MANNA.—The name of a sweet, laxative, concrete juice, distilled from a Sicilian species of the ash tree, the *Ornus fraxinus*.

Though the best manna is obtained from Sicily, it is also produced in many parts of southern Italy. The mode in which the manna is obtained is by making several incisions into the bark of the tree, and then fixing below the wounds a narrow, shallow wooden gutter, placed at a slight downward angle, to facilitate the flow of the sap, which, slowly running down the channel, is, by the heat of the sun, so far evaporated, that, after a day or two's exposure, the whole becomes crystallized, taking the shape of the mould in which it has been caught and dried. After a sufficient time to insure the evaporation of most of the water from the sap, the soft, waxy sugar is cut out of the mould with a flexible knife, divided into lengths of two or three inches, and packed in small boxes lined with paper, containing from one to two pounds each, according to their size.

Manna possesses only one medical property, that of a mild laxative. On account of the gentleness of its action, it is well adapted for infants and young children, while its sweetness always makes it a favourite medicine with juvenile patients.

About half a drachm scraped down, and dissolved in a spoon with a little warm water, makes an efficient dose for an infant of six or eight months; for children of from two to three years, a piece of manna, weighing from 1 to 3 drachms, may be placed in their hands to eat as a confection. The dose for an adult is from half an ounce to an ounce and a half. As manna acts merely on the bowels as a laxative, it is only serviceable where there is no fever, acidity in the bowels, or any crudity to be carried away; in such case, something more will be requisite than so simple an agent. A very good way of using the manna, and combining it with a more active medicine, is to give it with senna. Thus, 2 drachms of senna leaves, and half an ounce of manna, if infused in 4 ounces of boiling water over night, and then strained, will make a good family medicine for children, giving from a dessert to three tablespoonfuls from one year up to eight years of age.

MANNA-CROUP, OR SEMOLINA.—A light and wholesome food, prepared from the best wheaten flour, and shaped into small grains, forming an excellent material for puddings and custards for invalids.

MARANTA.—The common botanical name of the plant which yields the arrow-root. See ARROWROOT, and FOOD.

MARASCHINO.—An Italian liqueur, made of brandy, a peculiar kind of Damascus cherry, and liquorice, the whole being distilled, and then sweetened with lump sugar.

MARASMUS.—A medical term for a general wasting or emaciation of the body, from whatever cause; the same in meaning as atrophy.

MARJORAM, the *Origanum vulgare*.—This common field and garden plant is a variety of thyme, and belongs to the Natural order *Labiatæ*. Though used largely for culinary purposes, the marjoram is now quite exploded from modern practice.

MARMALADE.—A confection made with Seville oranges and sugar, and for an invalid, whose stomach forbids the use of butter, forms a very agreeable and useful substitute at tea, when spread on toast or bread, the orange bitter acting as a stomachic and tonic.

MARROW.—The nutriment of the bones, and the lightest of all the animal oils. The marrow enclosed in the long bones, besides affording nourishment to the bony sheath in which it is contained, serves the double purpose of adding to the strength and lightness of the bone.

The marrow of sheep and oxen is highly esteemed by perfumers for the manufacture of pomatums, and other applications for the human hair, but it is doubtful if any grease or oil surpasses castor oil for that purpose.

MARRUBIUM VULGARE.—The botanical name of the Horehound, which see.

MASS, OR MASSA.—A word used in pharmacy, and in the writing of prescriptions, to signify the lump into which the ingredients are made when mixed and wetted, before being divided into pills; as the dough, when fermented and kneaded, becomes the baker's mass, before it is weighed into pieces, to form loaves.

MASSA CARNEA, in anatomy, is a muscle of the sole of the foot, and called *plantar pedis*.

MASSETOR. — One of the muscles of the cheek, whose chief operation is to assist to draw up the lower jaw in eating.

MASTIC, sometimes MASTICH.—A pure resin; the exudation of a shrubby tree, growing on the Greek islands of the Archipelago, and the coast of the Levant, the *Pistachia lentiscus*. The resin is in small, white-yellowish tears, and is only used in medicine in one preparation—in the aloes and mastich pill, commonly known as the dinner pill. Mastich is used in the arts as a varnish, and the Eastern ladies chew it constantly to give whiteness to the teeth, a purpose which it unquestionably effects.

MASTICATION.—The process of eating, or, more properly, of chewing. One of the most important of all the operations connected with the function of digestion, as on the effectual manner in which the food is ground depends the completeness with which the stomach can soften and prepare what is received, and allow of the entire elimination of the chyle. Upon the importance of thorough mastication, see the articles Digestion and Food.

MASTICATORIES. — Certain drugs which, when chewed, purify the breath, clean the teeth, benefit the condition of the mouth, or induce a copious flow of saliva; and in this last respect they are supposed to afford relief in cases of toothache. Of these substances the chief are orris root, mastich, myrrh, and pellitory root.

MASTODINIA.—A term occasionally employed to denote a severe pain in the breast, such as is felt by weak females while suckling.

MASTOID.—A word used by anatomists, and applied to small conical processes on the bones, having a fanciful likeness to a *mamma*, or breast. The principal instance is that of the mastoid process of the temporal bone.

MATERIA MEDICA.—By this term is understood whatever is used in the art of medicine for the preservation of health or the cure of disease; a collection of all the drugs used in practice.

A "Materia Medica" is also a work containing the history of every animal and vegetable substance, of every mineral, earth, or salt, forming a part of the great whole of the materials of medicine, as the "Pharmacopœia" is a work devoted to the mode of preparing those multitudinous articles, with their dose, and the mode of prescribing them. Materia Medica, as a system, is made a branch of study, and in the *curriculum*, or course of study, laid down for the medical student, forms one of his first year's classes.

MATRASS.—A chemical vessel of a globular shape, with a flat bottom, made of glass, iron, or pottery, and used for what is called digesting.

MATRIX.—The mother, or womb. An old-fashioned word for *uterus*. See Womb. Also the name of a mould, and of the earthy incrustation that invests fresh ore.

MATTER.—A substance, body, anything in nature capable of division, and having length, breadth, and thickness; also the fluid humour which flows from a sore or abscess: in this sense see Pus.

MATURATION.—A surgical term, applied to the period when an abscess is ripening, or progressing to maturity, or the time when it will be fit to open, and allow the escape of the purulent matter or pus. It is during the process of maturation that hot fomentations or poultices are so beneficial in expediting the formation of matter. See Abscess.

MAXILLA.—The jaw. The upper jaw consists of the two maxillary bones, the largest, with the exception of those of the lower jaw, of all the bones in the face. The superior, or upper maxillary bones, assist to form the orbit, the nose and the cheek being attached to the nasal, ethmoid, lachrymal, and malar bones, and articulating with the zygomatic process.

The lower jaw, or inferior maxillary bones, are too well known to require any description. Each jaw is furnished with a row of alveolar processes, or cases between which the teeth project, and are, in a measure, supported; for only the fangs, or roots of the teeth, are embedded in the substance of either jaw. Each of the four bones constituting the two jaws are abundantly supplied with bloodvessels and nerves, a small branch of the first, and a twig of the latter, being sent up or down to every tooth.

Thirty-eight muscles are attached to the two jaws, and are thrown into action with every bite made, and every motion of the mouth in the complicated operations of biting, breaking, chewing, and swallowing. The strength of these muscles sometimes cause a dislocation of the lower jaw. See DISLOCATION.

MEAD, METHEGLIN, HYDROMEL, OR BRAGGET.—Various names for an intoxicating beverage made from honey, in use from the most remote ages among the ancient Britons and Scandinavians, and regarded by those rude nations as an earthly nectar, and a drink immeasurably superior to the wine of the grape or barley, as the various potations made from grain were called. Among the Welsh, mead, or metheglin, is still occasionally used, though as a general beverage it has long ceased to be esteemed. There are many modes of preparing this heavy drink; some by simply fermenting the honey and water, others by making a strongly spiced decoction of the ingredients before allowing the mass to work. Those who are desirous of knowing how to manufacture the old English bragget, a beverage sold as one of the choicest articles in the country, will find the following receipt sufficiently near to make a very potent liquor:—

To 28 pounds of honey add 8½ gallons of boiling water: mix thoroughly. Boil in half a gallon of water the peel of 3 lemons, 1 ounce of ginger, 2 drachms of mace, 1 drachm of cloves, and a small bundle of rosemary: strain, and add immediately to the hot mixture; stir the whole together, and set aside in a cask till quite cold. Mix two large spoonfuls of fresh yeast with a quart of the liquor; pour into the cask, and allow it to remain till the fermentation has taken place, when the cask is to be bunged up. To obtain metheglin in perfection, it should remain a year in the wood untouched. It is then to be bottled, and kept for at least six months before being used, when a very agreeable and potent liquor will be obtained.

MEAL.—The coarse flour of any grain or seed. The meals used in the practice of medicine as articles of dietary, or as remedial agents, are those of the oat, barley, peas, and lentils; and for external application those of linseed and almond.

The oatmeal, as an article of food, is too well known to require description, forming as it does, both as a porridge and a bread, so large a portion of the daily food of the Scotch and Irish. Of the nutritious nature of the former it is unnecessary to speak, the oat yielding starch, fat, sugar, gluten, gelatine (or cellulose), and gum; all the proximate principles constituting heat-giving and flesh-forming foods. Besides possessing these advantages, oatmeal, in consequence of the broken-up husk left in it, acts on the bowels as a mechanical aperient, keeping them, generally, extremely regular. In this respect it acts as brown bread on the invalid, the husk, or bran, left in the flour stimulating the bowels by the irritation of its sharp points on the mucous membrane. The bread or cake made from oatmeal is less nutritious than the porridge, owing to the mode of preparation.

Barley-meal is less agreeable as a porridge than the other, and is therefore seldom used, though containing even a higher proportion of the carbonaceous and nitrogenous principles than oats; it, however, makes an excellent bread, and, on account of those principles, a very nutritious one. It is made in the form of bannocks, either alone or in combination with potatoes or oatmeal.

Peas-meal, or, more properly, flour, contains starch, fat, sugar, caseine, gelatine, and gum, but is deficient in gluten; this, however, is compensated for in a great measure by its large per-centage of caseine, or cheese, a highly animalizing principle.

On account of these properties, peas-meal makes an extremely nutritious aliment, and, mixed with hot water into a paste-like porridge, and eaten with a piece of butter, forms a very common and much-esteemed food in the West of Scotland, under the name of brose. The meal of lentils contains the same properties as that of peas, only in a less degree. It is this article which, under the name of the *Revalenta Arabica*, has become so popular as a dietary for invalids. The peas-meal, however, is much nicer, and, as shown, is more efficacious, from containing a larger sum of heat and flesh-forming principles. See FOOD.

Linseed and almond meals are only used externally: the first, on account of its amount of oil, forming an excellent emollient poultice when properly made; the latter, from its soft, bland character, is a very useful article to smooth and whiten the hands, when used with water and a little soap, the hands being freely washed with the moistened powder: it is also employed as a lute. See POULTICES.

MEALS.—If the preservation of the life entrusted to us is the first duty of man, the keeping that life in a state of healthy action should be equally imperative. To do this effectively, the two first considerations are *food* and *exercise*, occupation of mind and body; *when* to take this food is an inquiry that should be answered with the same care bestowed on the substances which constitute our aliment. The meals, then, or the sufficiency of food to be taken at one time, should have reference not only to the person's occupation, his amount of physical and mental labour, but to his hours of action and repose.

In arranging the definite period for each meal, the person should calculate the number of hours between his rising in the morning and his retiring to bed at night, and then endeavour to divide this time into four as nearly equal spaces as he can, and assign each as an hour for a meal. It will be seen by this that we advocate the old-fashioned sequence of meals in preference to the modern and more artificial mode of living, fully impressed with the belief that the first is more in accordance with the requirements of nature, and consequently more conducive to health. The usual number of working hours averages from fifteen to sixteen a day: perhaps the latter is more generally correct, for, should not the *body* be occupied the whole time from the getting up to the going to bed, the *mind* is; and there is consequently fatigue and exhaustion.

As the stomach usually takes from four to five hours to perform the process of digestion, and as that organ should never be allowed to remain empty for any length of time, these sixteen hours must be divided into the four periods we are about to indicate. Where unavoidable employment prevents such an arrangement, the space from morning to night may be reduced to *three* periods, but should never fall below that; for no opinion is more fallacious than that the stomach, jilted of its midday meal, can compensate itself from a richer and more varied repast in the evening; or that three courses at six o'clock, with plenty of time to enjoy them, will more than atone for a plate of roast meat and potatoes at one or two. The stomach, rendered torpid by long abstinence, will not be flattered into performing a double duty by a multiplicity of rich foods, in all probability as badly assorted for the purposes of digestion, as out of character by their number and incongruity.

It is also a great mistake to suppose that the breakfast is required as soon as the individual is out of bed; the stomach then has hardly recovered from the torpidity of the night, and requires action and the free circulation of the blood, before it is in a state to perform its healthy function. Those, however, who are obliged to work for two or three hours before breakfast should take with them a few mouthfuls of biscuit or bread to eat about an hour after beginning work, so that when the stomach is stimulated to full action, a small amount of nourishment should be put in it, to give the gastric juice some solid on which to operate, instead of irritating the coats of the stomach by that gnawing feeling known as the sense of hunger. By adopting this precaution, the organ will be in a state of vigorous activity when, at eight or nine o'clock, the person sits down to his breakfast.

Those whose labours do not commence till after their first meal should be careful not to partake of it for at least *half an hour* after leaving their beds, or till the body has been actively excited, if not by a brief exercise, or some gymnastic feat, by a free use of the flesh-brush over the trunk, to excite the circulation of the blood. Whatever may be the occupation of the person, the breakfast should always be made the meal of most importance, after the dinner, and though with the man of sedentary habits less substantial than that of the working man, should always consist of flesh-forming materials, and a sufficiency in bulk to give the stomach material on which it can act for some hours. To induce the stomach to take in a due quantity of bread, or solid matter, a bloater, slice of bacon, piece of ham, or whatever savoury article may be selected, should be eaten with it, the object of all such relishes being rather to necessitate the swallowing of a large bulk of bread or toast, than any special benefit to be derived from the few mouthfuls of animal food taken. As the most important business of the day is usually performed in the morning and noon, whether the exercise is that of the mind or body, the benefit of laying up a store of nutriment in the stomach, to be converted into healthy blood as the toil of the day demands extra stamina, will be evident to all.

When the breakfast has been at eight, the dinner should be at one o'clock; and when at nine, at two o'clock. The best hour for tea is about six, so as to leave at least three clear hours before the supper which should consist of some simple articles—bread and butter and oysters, or bread and cheese, with celery, and a glass of ale or porter, or, to those who are accustomed to its use, a glass of spirits and water. The idea that suppers of all sorts are hurtful is most absurd and unreasonable. Hot meat suppers—a second edition of dinner, in fact—would, to many persons, be very injurious; others, however, who do not go to bed for an hour after, and whose appetite is strong, may partake of such a repast with perfect impunity. Such suppers as are advocated here may be taken with safety, and by invalids; nor will there be any fear of nightmare if the person adjourns to bed within a quarter of an hour of such a meal.

Exceptions of course frequently occur, not only as regards supper, but also as to the hours given for the other meals—cases where the person's stomach and his avocations must be consulted, and all rules made to submit to the state of the individual's appetite and his business. This rule, however, should be always observed, —that whatever hours are fixed on for the different meals, those times should be rigidly adhered to, and the virtue of punctuality in eating faithfully observed. So great, indeed, is the influence of habit in this respect, that a person accustomed to dine or breakfast at a regular hour will always—unless in ill-health—feel hungry, or disposed to eat, at the recurrence of the time appointed.

Where the meals follow at the short intervals of four or five hours, luncheon, or any intermediate eating or drinking, is not only uncalled for but reprehensible.

With literary men, and those whose occupations perpetually tax the brain, if the day's toil can be conveniently brought to a close by five, or even six o'clock, it is more beneficial to take a slight repast at one o'clock, and delay the dinner till the day's work is over. If, however, their occupations engage them up to night, the dinner should be taken at two, and an hour, or an hour and a half, of perfect repose taken after it, and before renewing their labours. To the dyspeptic patient, or those suffering from habitual irritability of stomach, and where all solid food produces pain, the breakfast should be preceded by a cup of hot coffee about half an hour before taking the meal.

The habit of taking provocatives before dinner, in the shape of small quantities of brandy, or glasses of bitters, is very objectionable, and can only be excused where the stomach is cold, and the appetite naturally languid. In such cases, about half an ounce of the compound tincture of gentian, or an ounce of the compound tincture of cardamoms, of the Edinburgh Pharmacopœia, may, however, often be taken with great benefit. See Food, and Digestion.

MEASLES.—There are few diseases which mothers apprehend with more alarm than measles; and justly so, for it often entails most serious consequences on the child who suffers from it,—more so, indeed, than any form of illness to which infancy and childhood are liable.

Measles is more an affection of the venous circulation, tending to general and local congestion, attended with a diseased condition of the blood, than either a fever or an inflammation, and though generally classed before or after scarlet fever, is, in its pathology and treatment, irrespective of its after consequences, as distinct and opposite as one disease can be from another.

As we have observed elsewhere, measles is always characterized by a running at the nose and eyes, and great oppression of breathing; so, in the mode of treatment, two objects are to be held especially in view. First, to unload the congested state of the lungs—the cause of the oppressed breathing,—and, secondly, to act vigorously, both during the disease and afterwards, on the bowels. At the same time, it cannot be too strongly borne in mind that, though the patient in measles should on no account be kept unduly hot, more care than in most infantile complaints should be taken to guard the body from *cold*, or any abrupt changes of temperature. With these special observations we shall proceed to give a description of the disease as recognized by its usual—

Symptoms.—These commence with cold chills and flushes, lassitude, heaviness, pain in the head, and drowsiness; cough, hoarseness, and extreme difficulty of breathing; frequent sneezing; defluction, or running at the eyes and nose; nausea, sometimes vomiting, thirst, a furred tongue; the pulse throughout is quick, and sometimes full and soft, at others hard and small; with other indications of an inflammatory nature.

On the third day, small red points make their appearance, first on the face and neck, gradually extending over the upper and lower parts of the body. On the fifth day the vivid red of the eruption changes to a brownish hue, and in two or three days more the rash entirely disappears, leaving a loose, powdery desquamation on the skin, which rubs off like dandriff. At this stage of the disease a diarrhœa frequently comes on, which being what is called "critical," should never be checked unless seriously severe.

Measles sometimes assume a typhoid or malignant character, in which form the symptoms are all greatly exaggerated, and the case from the first becomes both doubtful and dangerous. In this condition the eruption comes out sooner, and only in patches, and often, after showing for a few hours, suddenly recedes, presenting, instead of the usual florid red, a dark purple or blackish hue; a brown fur forms on the gums and mouth, the breathing becomes laborious, delirium supervenes, and, if unrelieved, is followed by coma; a fœtid diarrhœa takes place, and the patient sinks under the congested state of the lungs, and the oppressed functions of the brain.

The unfavourable symptoms in measles are a high degree of fever, the excessive heat and dryness of the skin, hurried and short breathing, and a particularly hard pulse.

The *sequelæ*, or after consequences, of measles are croup, bronchitis, mesenteric disease, abscesses behind the ears, ophthalmia, and glandular swellings in various parts of the body.

TREATMENT.—In the first place, the patient should be kept in a cool room, the temperature of which must be regulated to suit the child's feelings of comfort, and the diet adapted to the strictest principles of abstinence. When the inflammatory symptoms are severe, bleeding in some form is often necessary, though, when adopted, it must be in the *first stage* of the disease; and if the lungs are the apprehended seat of the inflammation, two or more leeches, according to the age and strength of the patient, must be applied to the upper part of the chest, followed by a small blister, or the blister may be substituted for the leeches, the attendant bearing in mind that the benefit effected by the blister can always be considerably augmented by plunging the feet into very hot water about a couple of hours after applying the blister, and keeping them in the water for about two minutes. And let it further be remembered, that this immersion of the feet in hot water may *be adopted* at any time or stage of the disease, and that whenever the *head* or *lungs* are oppressed, relief will *always* accrue from its sudden and brief employment. When the symptoms commence with much shivering, and the skin early assumes a hot, dry character, the appearance of the rash will be facilitated, and all the other symptoms rendered milder, if the patient is put into a warm bath, and kept in the water for about three minutes. Or, where that is not convenient, the following process, which will answer quite as well, can be substituted:—Stand the child, naked, in a tub, and having first prepared several jugs of sufficiently warm water, empty them, in quick succession, over the patient's shoulders and body; immediately wrap in a hot blanket, and put the child to bed till it rouses from the sleep that always follows the effusion or bath. This agent, by lowering the temperature of the skin, and opening the pores, producing a natural perspiration, and unloading the congested state of the lungs, in most cases does away entirely with the necessity both for leeches and a blister. Whether any of these external means have been employed or not, the first internal remedies should commence with a series of aperient powders and a saline mixture, as prescribed in the following formularies; at the same time, as a beverage to quench the thirst, let a quantity of barley-water be made, slightly acidulated by the juice of an orange, and partially sweetened by some sugar-candy, of which, when properly made, and cold, let the patient drink as often as thirst, or the dryness of the mouth, renders necessary.

No. 1. *Aperient Powders.*—Take of—

Scammony (powdered)	24 grains.
Jalap (powdered) . .	24 grains.
Grey powder	18 grains.
Antimonial powder .	18 grains.

Mix, and divide into twelve powders if for a child between two and four years of age; into eight powders for a child between four and eight years of age; and into six powders for between eight and twelve years: one powder to be given, in a little jelly, or sugar and water, every three or four hours, according to the severity of the symptoms.

No. 2. *Saline Mixture.*—Take of—

Mint water	4 ounces.
Powdered nitre . . .	1 scruple.
Spirits of mindererus .	1½ ounce.
Antimonial wine . .	3 drachms.
Syrup of saffron . . .	2 drachms.

Mix. To children under three years give

a teaspoonful every two hours; from that age to six a dessertspoonful at the same times; and a tablespoonful every three or four hours to children between six and twelve.

No. 3. *Tonic Mixture.*—Take of—

Infusion of rose leaves	6 ounces.
Quinine	8 grains.
Diluted sulphuric acid	10 drops.

Dissolve and mix. Dose, from half a teaspoonful up to a dessertspoonful once a day, according to the age of the patient.

The object of the aperient powders is to keep up a steady but gentle action on the bowels; but whenever it seems necessary to administer a stronger dose, and effect a brisk action on the digestive organs—a course particularly imperative towards the close of the disease,—two of these powders given at once, according to the age, will be found to produce that effect; that is, two of the twelve for a child under four years, and two of the eight and two of the six, according to the age of the patient.

When the difficulty of breathing becomes oppressive—as it generally does towards night,—a hot bran poultice, laid on the chest, will always be found beneficial. The diet throughout must be light, and consist of farinaceous food, such as rice and sago puddings, beef tea, and toast; and not till convalescence sets in should hard or animal food be given.

When measles assume the malignant form, the rules just given must be broken through; food of a nutritious and stimulating character should be at once substituted, and administered in conjunction with wine, and even spirits, and the disease regarded and treated as of a typhoid character. But as this form of measles is not frequent, and, if occurring, hardly likely to be treated without assistance, it is unnecessary to enter on the *minutiæ* of its practice here. What we have prescribed will in almost all cases be found sufficient to meet every emergency, without resorting to a multiplicity of agents.

The great point to remember in measles is not to give up the treatment with the apparent subsidence of the disease, as the *after consequences* are often *more serious*, and to be more dreaded, than the measles themselves.

To guard against this danger, and to thoroughly purify the system after the subsidence of all the symptoms, a corrective course of medicine and a regimen of exercise should be adopted for some weeks after the cure of the disease. To effect this, an active aperient powder should be given every three or four days, with a daily dose of the above tonic mixture, and as much exercise by walking, running after a hoop, or other bodily exertion, as the strength of the child and the state of the atmosphere will admit,—the patient being, wherever possible, removed to a purer air as soon as convalescence warrants the change.

MEASURES.—Vessels employed in the combination of medicines, either to indicate the proportions used in preparing medical preparations, or to instruct the dispenser as to the exact quantity to be combined in the mixture or prescription to be made up. Measures, as a general rule, are confined to fluid substances, though fluids are sometimes sold or dispensed by weight. The measures in general use in the medical profession are the graduated ounce measure, and the drachm, minim, or drop measure; both made of glass. The first may be either an 8 or a 2-ounce measure; the number of *ounces* being cut in the glass in one line, and the *drachms* and half-drachms in another; the ounce gradients being defined by a figure resembling this (℥), and the drachms by the annexed symbol (ʒ).

The medical fluid ounce is divided, like the ounce by weight, into eight equal parts or drachms, each drachm containing 60 drops, as each drachm, solid, consists of 60 grains.

Medical men have always their weights or measures about them, but their patients are frequently much troubled to apportion the medicine sent, and when ounces or drachms are ordered to be taken, are confused and mystified to know exactly how much should be given. In such a case as this, the common domestic appurtenances can always be made useful, if they are not exactly correct. Thus, a wineglass of the ordinary capacity, when filled, holds 2 ounces; a teacup, 4 ounces, or a quartern; a small teaspoonful, 1 drachm; a dessertspoonful, from 2 to 3 drachms; a tablespoonful, 4 drachms, or half an ounce. See WEIGHTS.

MEATUS.—A passage. A term used by anatomists, and applied to different parts of the body, particularly to channels leading from the external parts to an internal organ, as in the ear, where the external tube or passage is called *meatus auditorius externus*, &c.

MECONIUM.—The juice of poppy. A term used in pharmacy for the thick inspissated juice or extract of poppy, a substance resembling treacle. The word is also, and more frequently, used by medical men, and applied to the first dark, slimy discharge from the bowels of all new-born infants, and which is generally expelled within an hour of the birth, though the bowels are not entirely relieved of it till fifteen or twenty hours after delivery, or till the mother's first milk has acted like a cleansing purgative to remove the impurities from the alimentary canal.

MEDICINES.—By this term is understood those articles which, whether simples, minerals, or belonging to the animal kingdom, are employed in the alleviation of pain or the cure of disease. The articles used by medical men for this purpose comprise the whole Materia Medica, and a large portion of the contents of the Pharmacopœia, the list of drugs extending to several hundred separate articles. It is not our intention to give a catalogue of the multitudinous substances used as remedial agents in the practice of medicine, but only to point out to the mother of a family, the housekeeper, or the emigrant, the most useful articles it behoves either party to select and procure. In the first place, however, we must observe that there is no mistake more universally entertained, or one which leads to greater injury in its results, than a belief that benefit is to be derived from a multiplicity of drugs. The medical man who in early youth has been well and deeply grounded in Materia Medica, will, as he progresses in life and medical experience, confine himself to fewer and fewer drugs, till at last his catalogue of articles will probably not exceed a dozen.

Some medical men, however, believe they cannot treat a disease properly unless they have the whole Pharmacopœia to fall back upon; and there are many thousands of persons who think, with such doctors, that there are special drugs for special diseases, and that a direct benefit is obtained by the combination of many articles: this is not only a mistake, but often a serious error.

There is a class of patients—and a very large one too—who do not consider themselves properly treated, though under the hands of the most able practitioner, unless they are daily supplied with a redundancy of draughts and mixtures; ignoring altogether the judgment of their physician, and attributing their recovery to the drugs alone, forgetting the skill and experience shown in the *manner* of prescribing them.

As we have already observed, the "Materia Medica" contains a list of many hundred articles, each one of which by the young practitioner is often supposed to be of an especial use, and therefore necessary, at some time or other, to complete his prescription.

We shall, after this, perhaps startle our readers when we say that the *whole effective virtue* of a chemist's shop may be comprised in SIX ARTICLES, and that, with a lancet in his pocket for extreme cases, and six paper packets in his coat or the folds of his turban, a man of experience may travel over the world, and treat every disease which hereditary contamination or climate may throw in his way.

Those six drugs which form the quintessence of the entire Pharmacopœia,—each drug being capable of performing three or four separate actions, according to the dose given, and, when combined with one or two of the others, effecting the very opposite results,—are—

Opium.
Tartar emetic.
Powdered squills.
Calomel.
Camphor; and
Elaterium, or
Croton oil.

In these few articles is embodied the whole strength of the Pharmacopœia, and by the judicious admixture of one, two, or three of these, every result sought for by medical men may be effected.

After this, it will be inferred that the list of articles we intend to recommend will be confined to those *strictly* necessary for general use.

LIQUIDS.

These articles should be kept in stoppered bottles, the stopper of each being secured by a cap of skin, firmly tied with twine, and every bottle distinctly labelled.

Antimonial wine.
Ipecacuanha wine.
Compound spirits of ether, or Hoffmann's anodyne.
Spirits of sal volatile.
Spirits of sweet nitre.
Laudanum.
Tincture of rhubarb, compound.
Tincture of cardamoms, compound.
Tincture of benzoin, compound, or Friar's balsam.

l.
hartshorn.
vinegar, of colchicum.
of kino.
id tincture of soap (opodeldoc).

f lead (*liquor plumbi*).

POWDERS.

ould be kept in wide-mouthed
ed with stoppers or bungs.

powder,
d ginger.
root, powdered.
powder.
d scammony.
d jalap.
tartar.

wder.
a, calcined.
a, carbonate of.
metic.
ial powder (James's powder).
of zinc (white vitriol).
lead.

te of soda.
te of potass.
acid.
salts.

d chalk.

MISCELLANEOUS.

nd colocynth pills.
nd rhubarb pills.
nd assafœtida pills.
nd blue pill.

abic.

on plaster.
e plaster, white and black.

ceti.
wax.
eaves.
r.
owder.
sheets of wadding.

the above articles may be kept
oxes, with their names legibly
the lid; but where bottles can
ed, they should be used for the

e the medicine chest thoroughly
there are several supplementary
quired, namely,—
with scales and weights.

A 2-ounce graduated glass measure.
A drachm or minim measure.
A small slab and spatula, or supple knife.
A few dozen of corks.
A bundle of tow.
A few bandages, of various lengths and widths.
A sponge.
Mortar and pestle—Wedgwood.
A syringe.
A bleeding pan.
Pair of scissors.
Case of lancets.
Chloride of lime, and a quantity of disinfecting fluid (chloride of tin).

A medicine chest of plain deal can be procured for a few shillings, and may be made according to the taste of the owner, and of a size to accord with the number of articles procured. The chest should be made with divisions round the sides for the bottles, spaces in the centre for the mortar, measures, scale-box, and slab, while a partition along the front may be made to confine the drugs and pills, enclosed in chip boxes or small gallipots; all of which can be piled in two or more rows, if necessary. Some straps or sheaths attached to the inside of the lid will hold the spatula, scissors, rollers, plasters, lint, or any other useful article. The emigrant who is likely to be thrown much on his own resources in a new country, either as head of his family or of an extensive household, should, in addition to the various articles ordered above, obtain a small pocket case of instruments, which should always be kept in the chest with the medicines and other appurtenances. The case should contain a pair of flat-pointed dressing scissors or forceps, a pair of sharp-pointed cutting ditto, a straight bistoury, a scalpel, a tenaculum, a pair of sharp-pointed forceps, a caustic case (of silver), an abscess lancet, a probe, a few surgical needles of different sizes, and a skein of white silk and another of unbleached thread, a gum lancet, a tooth-key, and a pair of tooth-forceps. With the above instruments properly fitted into a pocket case, a person will be armed for almost every contingency that may happen in the way of surgical accident; while with the drugs he will be enabled to treat any disease which he may be called upon to prescribe for. One more instrument will render the stock indeed complete, an *elastic gum catheter*. As the length and shape of this prevents its being carried in the pocket case, the catheter should be assigned a place in the inside of the lid of the medicine chest.

MEDULLA OBLONGATA.—A name given by anatomists to that portion of the small brain, or cerebellum, which descends through the occipital bone to enter the spinal sheath, and become the spinal marrow. See BRAIN, and SPINAL MARROW.

MEGRIM.—A neuralgic affection, in which the chief symptoms are an acute pain in the temples and forehead, with a remarkable depression of spirits.

The disease is generally found in persons of a melancholic temperament and of a weakly habit of body, and often existing with great debility. The pains in the head, though remittent, are, for the time they continue, long and severe, and most generally occur at the decline of the day, or towards evening. This distressing malady is more a symptomatic affection, depending on a general functional derangement of the system, than a disease proceeding from any intelligible chain of causes. An apathetic state of the stomach, and a torpid condition of the liver, will, in general, be found existing in all such cases.

The TREATMENT demands a change of scene, cheerful society, exercise, and a dietary in accordance with the state of the patient's physical languor, and which should embrace a certain amount of animal food once a day, the Revalenta Arabica night and morning, with a due proportion of sherry daily, with dinner, and the following pills taken three times a day, till the functions of the stomach and liver are restored to a healthy order.

Take of—

Blue pill	18 grains.
Powdered rhubarb . .	12 grains.
Carbonate of soda, dried	24 grains.
Quinine	9 grains.

Mix, and make into a mass: divide into twelve pills: one to be taken an hour before breakfast, dinner, and supper.

At the same time, the bowels should be kept open by a daily dose of the Harrowgate or Cheltenham waters, or by dissolving 2 drachms of Epsom salts, and the same of the phosphate of soda, in 8 ounces of water, and drinking the whole, every second morning.

MEIBOMIAN GLANDS, or CILIARY FOLLICLES.—A series of small glands, named after their discoverer, Meibomius, which, like minute pin's heads, are situated at the margin of each eyelid, a duct from every gland supplying nourishment to each eyelash. These glands are in children, and some persons of a scrofulous habit, liable to a state of acute and chronic enlargement. In children this enlargement is called a stye, and in the adult produces the disease known as *blear eye.*

MEL.—The Latin name for Honey, which see.

MELÆNA, or Hæmorrhage from the Bowels, and popularly known as Black Jaundice.—The peculiarity of this disease is that it is seldom attended with pain, though it generally attacks persons of weak or exhausted constitutions, and those suffering from chronic dyspepsia.

The CAUSE of the thick, pitchy evacuations which form what may be called the distinctive feature of the disease, is supposed to be a hæmorrhage from the minute branches of the vena porta, charged with the impure blood from the bowels, on its way to the liver to secrete the bile.

The TREATMENT consists in giving doses of grey powder and Dover's powder every four hours, in the proportion of 3 grains of the first and 5 grains of the last, with an occasional dose of castor oil, assisted by a light, mucilaginous diet.

MELALEUCA LEUCADENDRON.—The botanical name of an East Indian tree, from which the once highly esteemed cajeput oil was obtained.

MELANCHOLIA.—Melancholy madness. See MADNESS.

MELON.—This beautiful fruit, now abundantly supplied to the public from the West Indies, belongs to the Natural order *Cucurbitaceæ,* and though so grateful in its perfume and flavour, is a fruit that should be eaten with great prudence by those whose digestive powers are at all weak, as it is liable to produce both flatulence and heartburn.

MELTING POINT.—A term in chemistry by which is understood the exact amount of heat at which metals, and other substances, become fused, and lose their identity.

Gold, 5,237°
Silver, 4,717°
Zinc, 680°
Lead, 612°
Camphor, 303°
Sulphur, 218°
Sodium, 190°
Potassium, 150°
Spermaceti, 112°
Phosphorus, 90°
Ice, 30° Fah.

MEMBRANE.—This is a word applied by anatomists generally to any thin, expansive texture, whether a sac or bag containing a fluid, lining a cavity, or like a parchment covering over some aperture.

igh used in this general sense on asions, on others a more special on is necessary, and for that purmbranes have been divided into re tissues:—1st, the mucous ne; 2nd, the serous membrane; cellular membrane; and 4th, the embrane.

IBRANES, THE.—A term by medical men to the delicate which surround the infant in the llowing it to float as in a bladder , safe from the reach of pressure xternal injury. The membranes consist of the first investure, e *amnium*, and the external memhe *chorion*. It is the rupture two, and the escape of the fluid the child floats—liquor amni—arly stage of labour, which is s the "breaking of the waters." es, in quick labours, it happens child is born with the head in the amnium, when the infant o be born with a *caul*, a circum-) which old women and nurses superstitious importance,—the lf, so born, being supposed to be with a happy and prosperous hile any one who may have the tune to obtain such a caul will, ime he wears it about his person, ved from death by drowning. two membranes, amnium and are attached to the placenta, or th, and expelled together with it, e general name of the *secundines.* OUR.

INGES.—The two membranes rain—the dura mater and the r; the first, from its thickness ngth, serving the purpose of an to the brain itself, protecting it bones which enclose it, and, by processes it sends off, supporting spheres and lobes, and preventing m pressing on each other; and by answering the purpose of carry off the blood from the d all parts within the head, and, alled sinuses within the skull, he jugular veins as soon as they

INGITIS.—By this term is d an acute inflammation of the es of the brain and spinal marrow, rly those of the dura and pia Some physicians profess to be lecide which of the three memf the brain is the seat of the tion, and have given the name of *arachnitis* to inflammation of the arachnoid membrane; but as the symptoms are almost precisely similar, whether the whole three or only one membrane is affected, and as only a *post mortem* can really define the actual seat of the disease, it is unnecessary to enter upon the symptoms, or indeed the treatment, as on a broad principle the symptoms of meningitis are the same as those of inflammation of the brain, and the treatment consequently almost precisely analogous. See BRAIN.

MENISPERMUM COCCULUS.—The botanical name of the plant yielding the columbo.

MENORRHAGIA.—An excessive monthly flux, or periodical discharge from the uterus; an immoderate flow of the menses, the same as amenorrhœa. See WOMB, DISEASES AND AFFECTIONS OF.

MENSES, OR CATAMENIA.—A natural healthy secretion of the uterus, to which that organ is subject from the age of puberty to the forty-fourth or forty-eighth year of age.

Though from fourteen to forty-five is the period within which this discharge usually takes place in Great Britain, there are many cases in which, from precocity, certain habits of body, and other causes, it begins much earlier, and continues even as late as fifty years of age: in others, again, it commences early, and ceases at an equally premature period. The age at which the catamenia begins and terminates varies considerably, as we have just observed, not only among women generally, but still more so according to the climate in which they are born and live. In many parts of the East the period of puberty occurs at a much earlier age than with us, or the women of northern latitudes.

The uses of the catamenial secretion, and the consequences that result to the system from the suppression, interruption, or excessive flow of that discharge, will be found under the article WOMB, when we treat of the function and diseases of that organ. It will be sufficient for us here to state that the secretion we refer to is of a sanguineous character; that its distinctive feature is the absence of *fibrine* in its composition, and that consequently this blood never coagulates; that the purpose it serves in the system is to keep the womb in a state of active health during the most vigorous years of life. Until this periodic discharge has been established, the womb cannot perform its chief function; and it becomes passive, and incapable of performing its most special duty, after the discharge has finally ceased, the female, from that period, being said to be past bearing.

So necessary is the menstrual secretion to the health of the female, constitutionally and locally, that if from any cause its first appearance should be prevented, or if, after being once established, it should be suppressed or retained, the system immediately suffers, and often very seriously, —as in *chlorosis*, or the green sickness, menorrhagia, and some other painful diseases,—till the natural drain is again established. Nature, when unable to relieve itself from the secretion, either from constitutional causes, from an imperforated uterus, or an obstructing hymen, will often effect a cure by forming a new outlet for the discharge. Thus, when long suppressed, it has been periodically discharged from the nostrils, the nipples, by issues forming themselves in the legs, thighs, or arms, and frequently from the bowels and bladder; indeed there are few parts of the body from which the catamenial discharge has not been known to have broken out when its natural channel has been interrupted, or the function of the organ suspended. See WOMB.

MENSTRUATION. — The periodical discharge of the uterus; a secretion which flows from four to eight days every lunar month, or about every twenty-eighth day. See above.

MENSTRUUM, or *Alkahest*.—This, according to the alchemists, was a dissolving liquid, which was to eat through metals, melt stones, and decompose all substances submitted to its powerful action;—an universal solvent. This potent fluid, like the philosopher's stone and the elixir of life, was one of the long-cherished hopes of the Arabic chemists, in their fruitless search after which so many enthusiasts spent their lives, and so many centuries were in a measure wasted; and, like the aims of their ambition, they either never discovered it or died without revealing the secret to posterity.

A menstruum is now regarded as any liquid capable of extracting the virtues or active principle of any ingredient submitted to its action. Water, either hot or cold, is the most universal menstruum or solvent we possess, whether used in the form of infusion or decoction.

MENSURATION, geometrically, is finding the length, surface, or solidity of quantities of bodies in some known measure, but, anatomically, signifies the mere taking the measurement of the chest or head, to ascertain the capacity of the lungs or the relative size of the brain.

MENTHA.—The botanical name of the family of plants which yield the several varieties of mint, as the spear and pepper mint, pennyroyal, and a few others, the whole belonging to the Natural order *Labiatæ*. See MINT.

MEPHITIC AIR OR EXHALATIONS.—Poisonous or noxious gases. This name was given by the old chemists to those deadly exhalations occasionally found issuing from the earth, or collected in mines, brewers' vats, long disused cellars, and sewers or cesspools, and which destroy life by suffocation. Of these gases, the most generally found are carbonic acid gas and sulphuretted hydrogen. See CHOKE-DAMP.

MERCURY.—The name given by the old chemists to the bright, subtle, and ponderous metal known as Quicksilver; which see.

MERCURY, SWEET. — A popular name for calomel, or the chloride of mercury.

MEROCELE.—A name formerly in use for a rupture in the groin, or a small, soft tumour.

MESENTERY.—A thick, fatty membrane, forming at once the cover and support of all the intestines. The larger portion of this membrane, or the mesentery proper, hangs like an apron in front of or over the small intestines, which are attached to it by the arteries, veins, and lacteal vessels passing in or out of them, and by its further margin firmly attached to the spine. Other portions of the mesentery support and unite the large intestines, such as meso-*colon*, *mesocæcum*, and *mesorectum*.

MESENTERIC DISEASE: TABES MESENTERICA.—We have already, under Digestion, Chylification, and Lymphatics, referred to the glands in the mesentery, the seat of the disease bearing the above popular and professional titles.

Mesenteric disease, sometimes called consumption of the bowels, is a disease to which children of a scrofulous habit of body are particularly liable; and as the malady affects the glands of the mesentery,—those chemical laboratories through which all the chyle and lymphatic fluid must pass before it reaches the thoracic duct,—it will be evident to every comprehension that any cause

g these glands or reservoirs, so as
oy their function by diverting the
of chyle or nutriment from reach-
e channel (thoracic duct) that
it to the heart, must immediately
the health and strength of the
; the circulation being thus de-
of all fresh material, and the body,
led to feed on itself, soon becomes
nd emaciated.

gh adults are sometimes affected
is disease, it is, as we have already
complaint to which childhood is
rticularly liable, and, with children
fulous parents, a disease of very
n occurrence.

PTOMS.—Tabes mesenterica is a
that develops itself very slowly
arly stages, the child declining so
lly that the true character of the
int is seldom suspected till the
becomes seriously ill. A gradual
appetite is one of the first symp-
which attracts attention; this is
anied by occasional fits of hunger,
the child eats for a few minutes
asly, then as suddenly rejects the
had been eating with such appetite.
n is hot and dry; there is great rest-
s and languor; the bowels are con-
he evacuations being of a pale clay
the breath is hot and fœtid; there
ns in the head and stomach; the
pears shrunken, the eyes large
ivy; the water has a milky appear-
the perspiration has an acid or
smell; the arms, legs, and entire
comes emaciated, while the stomach,
same ratio, becomes hard and
, till, when stripped, the child
to be all stomach. After a time
ibs become dropsical, and, unless
l, the patient gradually sinks from
exhaustion. The only affection
dhood that could be mistaken for
eric disease is the presence of worms
bowels and stomach.

TREATMENT consists in removing
ient to some locality where he may
n abundance of pure country air,
here, according to the debility
, he may take as much exercise
can possibly enjoy by running,
, playing at ball or battledore,
ng a hoop, or by any kind of exer-
at will thoroughly circulate the

salt water bathing, or tepid water,
d by friction with a rough towel,
be practised in the morning, once
e a week; at the same time care should be taken to cover the child with abundance of thick, warm clothing.

The next important consideration is to supply the patient with plenty of light, nutritious food, which should be given punctually at regular hours; and finally, early hours and long nights should be insisted upon as long as the patient is under medical treatment. Upon the due and steady observance of the above directions the greater part of the cure depends, the medical means being in a considerable degree subsidiary to the dietetic and sanitary: these consist of the following powders and mixtures.

Alterative Powders.

No. 1. Take of—

Grey powder	18 grains.
Powdered rhubarb	12 grains.
Carbonate of soda	36 grains.

Mix, and divide into twelve equal powders for a child of from four to six years of age, giving one twice a day in a little jelly, honey, or sugar and water; and into nine powders for a child from six to nine years of age, given in the same manner and at the same times as the others. Take of—

Castor oil	1 ounce.
Mucilage of gum arabic	1 ounce.
Simple syrup	½ ounce.

To the mucilage, placed in a mortar, add the castor oil by degrees, rubbing constantly till both are incorporated, then add the syrup; mix again, till a smooth, creamy mixture is obtained, pour into a 6-ounce bottle, and then add—

Liquor of potass	10 drops;
Mint water	3½ ounces;

shaking the bottle freely as the last article is poured in by degrees. Mix, and give a tablespoonful three times a day to a child of eight or nine years; a dessertspoonful three times a day from five to eight years; and a teaspoonful at the same times to a child under five years of age.

Both these medicines should be continued for some time before any alteration is made in the treatment, unless the state of the bowels should require the exhibition of an active aperient, when a little senna and manna tea may be given in the morning early, or 5, 8, or 10 grains of jalap, according to the age of the child, added for the occasion to one of the above powders.

When the debility is very great, and the appetite continues languid, a few teaspoonfuls of sherry should be given once, or, if necessary, three times a day, the quantity given being regulated by the age of the patient. After persevering for a fortnight in the use of the above medicines, they are to be discontinued for a time, a dose of an aperient medicine, such as we have already described, given for one or two mornings, and the following powders and mixture employed for another fortnight or three weeks, an aperient being given at intervals, if necessary, as in the manner already noticed.

Alterative Powders.

No. 2. Take of—

Precipitated sulphuret of antimony	2 scruples.
Powdered sarsaparilla .	½ drachm.

Mix, and divide into twelve powders for a child from four to six years old, and into nine powders for a child from six to nine years old, one powder being given twice a day. Take of—

Steel wine (vinum ferri)	1 ounce.
Syrup of orange peel .	½ ounce.
Mint water	2½ ounces.

Mix: a teaspoonful three times a day to be given to a child from three to six years, and a dessertspoonful from six to nine at the same times.

When the case is obstinate and of long standing, it may be necessary to alternate the two sets of powders and mixtures for two or three times before the cure is effected, and it may also be necessary in some cases to use friction over the abdomen, and rub in an ointment composed of camphor, lard, and mercurial ointment. When such is the case, the hydriodate of potassa, in the form of a mixture, must be employed with the ointment: for this see SCROFULA and GOITRE. In all cases the diet must be light and nutritious, and embrace farinaceous foods and a moderate quantity of animal fibre.

MESMERISM.—The science of animal magnetism, as now practised under the above generic name, owes its origin to Frederic Antony Mesmer, a distinguished German physician, born at Baden in 1739. It was not, however, till 1772 that, his attention having been called to the investigation of the loadstone, or magnet, he first conceived the idea of converting its properties to the uses of medical science, and, after much persecution, eventually obtained from a large body of medical men the recognition of the principle of his new discovery.

The science of mesmerism, under two of its most extraordinary phases, of *electro-biology* and *clairvoyance*, has now become not only a fashionable but an accredited means of medical practice; and though many empirics and adventurers have employed it as a means of imposition, the facts connected with it are so remarkable, and its effects so extraordinary, that as a curative agent we not only give it space, but shall, in another place, show its capabilities, and the diseases in which it is most beneficial. For the present we have borrowed, from Mr. J. Dixon's clever little work on "Hygienic Clairvoyance," an abstract of its history and theory.

The subject of hygienic clairvoyance, however novel it may appear to modern readers, is not new to the world.

The ancient Grecian philosophers, Pythagoras and Plato, and their successors, who discoursed of hygiene as a department of human wisdom, had recourse to clairvoyance, the "clear sight" of magnetic sleep. They regarded the clairvoyant, or clear-seer, as a living entrance-door to the sacred temple of Inner Realities. They knew that to such an one the Internal becomes, without the use of the outward senses, more perceptible than the External is to us by the ordinary mode of objective perception.

Pythagoras received his instruction on this subject in the temples of Egypt, in which, as well as in those of ancient India, there are representations of individuals being put into the magnetic sleep by the same simple process which we moderns have, of late years, discovered to be effective.

The family of Hippocrates, "the father of physic," were, it is recorded, ministers in the temple of Æsculapius. Hippocrates' knowledge of clairvoyance is shown by the following passage—no longer obscure—in his writings:—"The sight being closed to the external, the soul perceives truly the affections of the body." This exactly states the case of the clairvoyant. He used to treat some disorders by the application of his hands; in other words, he used to magnetise—or as we, in these days, would say, mesmerise—the patient, probably under clairvoyant indications. Pythagoras himself, Jamblichus says, used this means to procure quiet sleep, with good and prophetic dreams. He even says, probably from analogous knowledge, that the art of medicine originated in this "divine sleep," for Jamblichus himself speaks of being a subject of the magnetic sleep. Æsculapius is said, according to Cicero, who wrote on this subject, to have uttered oracles in the temple asleep for the cure of the sick.

If we turn to the sacred Scriptures, we there learn many things in relation to this subject. Moses, it may be inferred, with other lore of the Egyptians, was instructed by their wise men in this magnetic science. We read of a youth being restored to life by a prophet; of an angel indicating the means of Tobias' recovering his sight, &c. But the Scriptures being accessible to all, we need not further refer to them.

The Jewish philosophic sect, the Essenes, it is matter of history, also taught the system, and practised it, of healing by "laying on of hands." It may be inferred that they knew also of hygienic clairvoyance, which is but an advanced chapter out of the same book.

The Romans, who received their philosophy from Greece, could not but be acquainted with this department of it; and so we read without surprise, that with them, as with the Greeks, the sick used to be brought to the temples, where remedies were revealed by this means for their disorders.

Celsus, the great Roman physician, according to Asclepiades, was familiar with the science. Tacitus records that, in obedience to a vision of the god Serapis, two men, one blind, and the other lame of an arm, had recourse to the Emperor Vespasian at Alexandria, and they were cured by simple processes, which we should call magnetic. Suetonius relates the same fact circumstantially. Strabo speaks of a certain place on the Asian shore, consecrated to Pluto and Proserpine, to which the sick were brought to be prescribed for by the priests during the sleep. The sibyls—virgin prophetesses of the Temple of Jupiter (in other phrase, clairvoyants under care of the priests of the temple) according to Saint Justin, declared many true things, and when the intelligence which animated them was withdrawn, remembered nothing of what they had said. This describes clairvoyance.

We might also quote authorities to show that the Druidesses of Britain and Gaul were clairvoyants, having among their functions the hygienic one of discriminating and prescribing for diseases.

There has been, indeed, no nation, from the earliest times, without this science. But the knowledge of it was not solely in the possession of temples and schools, for, wherever deposited, this knowledge could only be expected to be found in the records of philosophy. But when younger and barbarous nations overran Europe, philosophy was put into abeyance, and its records passed out of the light of day. From the darkness consequent upon their incursions slowly emerged other philosophies, also exhibiting incompleteness, until at length Europe is practically under the sway of one distinctively styled the "Natural," from which the subject on which we are engaged is excluded. Of course "natural" philosophy is the opposite of a "spiritual" philosophy, of which clairvoyance is an item and exponent.

But, parallel with the decadence of ancient philosophy and worship, there arose the new Christian religion, and something of that which the former lost was saved by the latter. The records, therefore, of our subject, which then became wanting in philosophy, are to be looked for in the archives of churches and religious institutions; and thus we find this subject in the middle ages intimately blended with that of religion in all the Christian nations. "The churches," says the historian Mialle, "in this matter succeeded the temples of the ancients, to which were consigned the traditions and processes of magnetism. There were the same customs of passing the nights in them, the same dreams, the same visions, the same cures."

The Church, in those days, recognized practically "the gifts of healing" as among those other gifts of the Spirit (1 Cor. xii. 7—11) of which it held itself to be the sacred custodian.

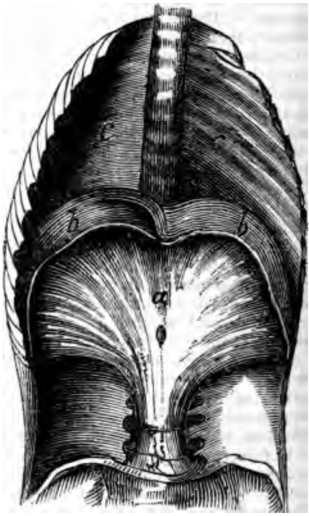
But whatever our subject gained under the sanction of the Church was associated with religious faith rather than with science. Hence the disfavour in which the records of it, by ecclesiastics, are held by our modern scientific professors. And when philosophy did find its way among churchmen, it was of the one-sided and sceptical kind which prevailed among the laity of the time, and thus with them also the subject fell into discredit. They agreed with the lay philosophers in regarding all such records (to borrow David Hume's words in commenting upon Vespasian's marvellous cures) as the "palpable falsehoods of an exploded superstition." But however ready the general mind to ignore or deny the fine truths involved in this subject, there were facts of continual occurrence which could not but attract the attention of independcountry is the bark of the stem, though that of the root is considered the strongest. The strong, burning feeling which this plant produces in the throat and fauces, if chewed or taken pure, is an obstacle to its general employment.

THE DAPHNE MEZEREON.

MIASMA, MIASMATA, OR MIASM.—A contagious infection, arising in poisonous atoms from putrifying bodies, decaying animal or vegetable substances, from fens, marshes, swamps, and the shores of stagnant meres, and waters loaded with rank vegetable matter. The manner in which this subtle and volatile gas is generated during the putrefactive fermentation, or, in the active state of disease, from the bodies of patients, acts on the healthy system, has never been satisfactorily explained; but that it infects the blood through absorption by the lungs seems clearly understood.

The term miasma, though embracing all kinds of infection, should in strict justice be confined to the noxious exhalations springing from vegetable decomposition, such as Malaria, which see, and Ague.

MIDRIFF.—A broad, fan-like muscle, which, attached to the two lumbar vertebræ by a broad tendon, spreads out upwards and forwards, to be attached to the ribs and the *sternum*, or breast-bone, just above the pit of the stomach, entirely dividing that portion of the trunk, by its shelf-like muscle, into two cavities,—the upper, the *thorax*, or chest, and the lower, the *abdomen*, or belly. The midriff, anatomically called the *diaphragm*, not only answers the purpose of a partition, preventing the organs in the space above pressing on those in the cavity below, but is one of the most important muscles of respiration in the body, rising and falling with every inspiration and expiration of the chest, the action of the ribs being regulated by the midriff acting in sympathetic union with the intercostal or respiratory muscles. This muscle is unlike any other in the body, being tendinous in its centre and muscular at the extremities; it slants obliquely upwards and forwards; is concave below, or towards the abdomen, and convex above, or towards the thorax; and in its centre is attached to the bag of the heart—*pericardium*. When the diaphragm contracts during inspiration, the ribs are brought down, the muscle becomes flat, and the cavity of the thorax is enlarged; and when it relaxes, the ribs ascend, the muscle again becomes convex, and the abdominal space is increased. The tendinous portion of the diaphragm has an opening through its centre, through which



THE MIDRIFF, OR DIAPHRAGM.

a. Opening for gullet, &c., in tendinous portion. *b, b.* Its fleshy convex surface. *c, c.* Cavities of the chest, in which the lungs and heart are placed.

vein of the trunk, the *vena cava*, and the gullet, or œsophagus, to reach the stomach.

phragm is occasionally liable to amatory affection, and is fre- he seat of a severe spasmodic mmonly known as hiccough; a which, when occurring in the of typhus, or in mortification, or peration, is a certain symptom of ng death.

RIA, OR MILIARY FEVER. iptive, inflammatory fever, to rsons of a lax constitution and ous temperament are more prone rs, females are more liable than d those in childhood are still

OMS.—These commence with the tory characters observable in the of scarlatina,—heat, thirst, pain d and back, hot and cold flushes, ıor; these are followed by an ightness about the region of the orious breathing, heavy sighs, d an unusual degree of alarm or Numbness of different parts of followed by profuse perspiration , sour smell; and an eruption of pimples, the size of millet seeds, n the face and neck; but at no ay this gradually extends over and extremities, the prominence erceptible to the eye, but evident l. About twelve hours after the arance of the rash, each pimple ll vesicle on its apex, filled with oloured fluid; about the third vesicles or small bladders charging a fœtid, pale-coloured scabby efflorescence succeed- uption, when the disease termi-

stinguishing features of this e, the extraordinary anxiety and the profuse sweating, and its smell.

EATMENT consists in keeping the ad her room tolerably cool, re- art of the bedclothes, and letting it lie with her arms outside the ad by giving mild cathartic me- uch as the annexed pills and Take of—

ound rhubarb pill	1 scruple.
el	8 grains.

divide into six pills, one to be ce a day. Take of—

hate of soda . .	1 ounce.
ı salts	½ ounce.
rmint water . .	6 ounces.

Dissolve: two tablespoonfuls to be given night and morning.

When the bowels have been sufficiently acted upon, the sweating is to be reduced by giving from five to ten drops of elixir of vitriol, in a wineglass of water, every four or six hours, and supporting the strength by the following mixture. Take of—

The decoction of bark .	6 ounces.
Aromatic confection .	1 drachm.
Quinine	6 grains.

Mix in a mortar, and give two tablespoonfuls three times a day.

Should the eruption be suddenly driven in, warmth and friction are to be applied to the skin, and by the employment of diaphoretic agents, such as the following, the rash again encouraged to the surface. Take of—

Spirits of mindererus .	1½ ounces.
Spirits of sweet nitre .	3 drachms.
Antimonial wine . .	2 drachms.
Spirits of sulphuric ether	2 drachms.
Syrup of saffron . .	3 drachms.
Camphor water . . .	enough to

make a 6-ounce mixture. Three tablespoonfuls are to be taken every four hours, while bottles of hot water are placed at the feet.

MILK.—Of all the forms and varieties of food, milk may be regarded as the most perfect type, and is the only article which, in the whole range of alimentary substances, contains within itself all the elementary principles of nutrition.

Though it is probable that the adult man could not for a series of years maintain the physical and mental strength of his frame on a diet exclusively of milk, if, at the same time, exposed to severe intellectual or bodily labour; there can be no doubt, from the fact that the young of all the mammalia, for a considerable period, not only live exclusively upon it, but rapidly develop their bodies under its use, that it is—at least for the period of their infancy—the very best article in nature for the purpose of nutrition in the first stage of life.

We have already shown, under the article Food, that the constituents of bone, muscle, brain, nerve, and all the tissues and organs of the body, are made up of heat-generating aliments, represented by sugar, and oil or fat; of flesh-producing principles, typified by caseine or cheese; of mineral salts, such as muriate of soda, phosphate of lime, &c., and of water. That milk contains all these ingredients in the highest quantity, and the best possible state of combination, is proved by the healthy state of the infant, and the rapid increase in bulk of the young of all mammiferous animals, during the comparatively short time they remain under a milk dietary. One pint of cow's milk, or sixteen ounces, contains—

Sugar, 6 drachms, or three quarters of an ounce;
Butter, 4 drachms, or half an ounce;
Caseine, 6 drachms, or three quarters of an ounce;
Mineral salts, 2 drachms, or one quarter of an ounce; and
Water, 13 ounces and 6 drachms.
Total, 16 ounces.

Different animals yield milk of a different composition or quality; and in some countries, according to the domestic animal most in use, the milk of the cow, the goat, the mare, or the ass, is used as an article of food; but in Britain, where there is an abundant supply of the best pasturage for horned cattle, the milk of the cow is the article universally employed. But as in infancy and disease it is often necessary to have recourse to another variety of the same fluid, especially when that of the mother fails, the physician has been obliged to inquire into the quality of the different milks obtained from our common domestic animals, that he may decide upon which, under the circumstances, is the most fitting for the infant or patient.

According to chemical analysis, a pint of

Human Milk

Contains—
Sugar, 4 drachms and 40 grains;
Butter, 3 drachms and 30 grains;
Caseine, 3 drachms and 30 grains;
Mineral salts, 35 grains; and
Water, 14 ounces and 41 grains.
Total, 16 ounces.

Asses' Milk

Contains—
Sugar, 7 drachms;
Butter, 1 drachm 45 grains;
Caseine, 2 drachms 20 grains;
Mineral salts, 35 grains; and
Water, 14 ounces 76 grains.
Total, 16 ounces.

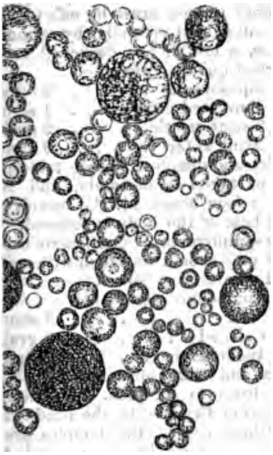
Of the three milks, it will be thus seen that cows' milk is by far the richest,—that it contains *more* caseine, more butter, a large proportion of mineral matters, and *less* water, than human milk; and that if we add a third more caseine, a sixth more butter, and double the mineral salts, we shall make human milk of the same *quality* as that of cows. The peculiarity of asses' milk is, that it exceeds in its proportion of sugar nearly one-half that of human, and one-fourth that of cows' milk.

The discrepancy in these three milks may be very easily rectified whenever it is necessary, either the first or the last being brought to the nutritive strength of the human milk.

If one-third of a pint of water be added to two-thirds of a pint of cow's milk, and a little sugar dissolved in the mixture, the excess of the caseine and butter will be brought to the standard of human milk, the added sugar compensating for the want of that article in the water. The deficiency of the caseine and butter in the milk of asses may be made good, and that fluid brought up to the standard of human milk, by adding an ounce or two of cream, according to the quantity of the asses' milk used.

Milk consists of three distinct articles, —cream, cheese, and whey. Cream being the oil or butter of the fluid, and consequently lighter than the water in which it is contained, naturally rises to the top of the vessel a few hours after the milk has been set aside. If an acid is added to the skimmed milk—such as that obtained from the stomach of the calf (rennet)—the milk is converted into a soft curd, the caseine; as the cream was the butter of the milk. When this curd is placed in a mould, and firmly pressed, it becomes a compact mass called cheese; while a quantity of pale, straw-coloured fluid is pressed from it, known in dairies by the name of whey, and which will be found to hold in solution the other two component parts of milk, the sugar and mineral salts. By evaporating the whey, the crystallised sugar, called *lactose*, or milk-sugar, will be obtained. Though caseine is the basis of all cheese, cheese is not all caseine, for the finest and richest cheese contains a considerable amount of butter, and, according to the amount of butter present, or the richness of the cheese, depends the digestibility of that article, but *not* its nutritive properties. The finest cheese is made with *unskimmed* milk, consequently all the butter in the cream of the milk is coagulated in, or mixed with the curd, when the rennet is added. The cheese or curd obtained from twice skimmed milk has no particle of butter in its composition, and is consequently poor, hard, dry, and extremely slow of digestion; but being all pure caseine—the animalising principle of the milk—it is consequently supporting to the system, and more flesh-forming material, than t Stilton ever made; and this, ard to cut, harder to eat, and still o digest. Such a cheese, there- he labouring man, with only bread y rations on which to toil for ary hours, and whose stomach is y as his appetite, is of more value imal food, especially when the is limited, and that from the son of its slow digestion. Such lso excites in the stomach a pecu- on, by which, whatever food may with it is brought into so perfect f digestion, that all contained in ach is converted into chyle, and, ral result, a large amount of flesh- nutriment thereby carried to the

ve already described what are the constituents of milk; but if we e drop of that fluid under the g power of a microscope, we shall cover its physical constituents; nization not less wonderful and g, though much less complex.



ARANCE OF MILK UNDER THE MICROSCOPE.

through this agency, the minute ll have expanded into an irregular ade up of innumerable large and lobules, united in a kind of mem- network. The large globules, or e what are termed the *colostrum*, a peculiar substance found in the milk of all the mammalia for some days after the birth of their young. The smaller globules, so regular in shape, and yet so different in size, are those of butter. The annexed cut gives a representation of a drop of cow's milk so magnified.

Milk, as an article of diet, is of the utmost importance to the young, and often of great service to the invalid and convalescent; though in some constitutions inadmissible, on account of the quantity of oil or butter it contains. Much of this objection, however, may always be overcome by taking the precaution of skimming off a portion of its cream before using it as a food.

In all cases where it is necessary to feed the patient with a good sustaining food, without the risk of inflammatory action or excitement succeeding, a milk diet is the best regimen that can be adopted, especially in all diseases affecting the respiratory organs, or inflammations of the stomach, bowels, bladder, or kidneys. It is also of great benefit after spitting of blood, or any active hemorrhage, while in gout it is of the highest importance as a dietetic agent.

The diseases of infancy and childhood, in which a milk diet is of the utmost consequence, are mesenteric diseases, scrofulous habits of body, spinal affections, epileptic fits, and enlarged glands, or whatever indicates a strumous taint of the blood. For such purposes, when cow's milk is too rich, even if denuded of a part of its cream, it may be often made wholesome and digestible by adding one-third of lime water to two-thirds of milk.

When, from the loss of her own milk, or from sickness, the mother is unable to suckle her infant, asses' milk, as agreeing more nearly to human milk than any other kind, is the article usually employed as the source of nutrition for the child. In mountainous countries, where neither cows nor asses are to be met with, recourse must be had to goats' milk, which, containing less caseine and more sugar than cows', is very well suited both for infants and invalids, and is but a shade less nutritious than asses' milk.

Butter, as we have already shown, is the mere fat of the milk, separated from the cheese, sugar, earthy salts, and the water of that fluid. Cheese, either according as it is made from cream, from unskimmed, and *twice* skimmed milk, is composed of caseine and butter, or pure caseine. Whey consists of the sugar, the mineral salts, and the water, and, consequently, makes an admirable diluent drink in all febrile or inflammatory diseases; and in the collapse stage of cholera, by supplying the blood with the water and salts of which it has been robbed by the rice-water evacuations, it must prove of great importance as a remedial agent in that disease.

That milk is easy of digestion, both hot and cold, will be seen at once by the following table, which, if compared with the digestibility of ordinary animal substances, under "Food," will show that very few articles are more quickly digested than milk.

	Time.	
Boiled milk . . .	2h.	0m.
Raw milk	2	15
Melted butter . .	3	30

The value of the milk of animals for therapeutic purposes has been recognized from the earliest ages. To the Arab, the camel was not only a beast of burden, and the source of his raiment and fuel, but supplied him also with a considerable portion of his simple food. The more rude and hardy Tartar obtained from the mares of his stud not only the usual products of milk, but a fiery spirit, to warm his sluggish blood. See KOUMISS. The Lap, on his part, regards his reindeer in the same light as the Tartar his horse, and the Arab now does his dromedary, and procures from his herd both food and covering. The Llama, the sheep, and the goat are also serviceable to man, yielding him, with equal bounty, fleeces for his warmth and food for his daily sustenance. The use of MILK BATHS as a tonic to exhausted constitutions seems to have been a fashion in vogue as far back as the Romans, and continued, but with less faith, even down to our own time. Catherine de' Medici never travelled without being attended by a drove of many hundred of she-asses, to supply her with her morning bath of asses' milk. Mary Stuart, during her long captivity in England, was allowed the frequent use of milk, and even wine baths, to strengthen her shattered frame. A late English voluptuary, a marquis of great wealth, was probably the last person in this country who marked his faith in milk baths to invigorate a worn out constitution, by taking one daily. If these baths were less successful in the case of the marquis than they were reported to have been to the Medici family, the reason probably lay in the English peer using cows' milk instead of that of asses, and in the misfortune of contracting for his article from London dairymen, instead of insuring the quality of the lacteal fluid by having it from the natural organ of the secretion, the udders of the living animal.

MILK FEVER.—This is one of the diseases to which women in childbed—especially with first children—are very liable, and may be induced by cold, by excessive heat in the room, or by any cause of undue excitement. The disease usually takes place about the third day, and is directly caused by some obstruction to the flow of the milk, as from an imperfect nipple, or irritation in drawing the breast.

SYMPTOMS commence with rigors, pain, and throbbing in the head, a repugnance to noise and light, flushed face, contracted pupils, and bloodshot eyes; the pulse is quick, full, and hard, the skin hot, tongue white, with constant thirst. The breasts are sometimes hard, full, and distended; at others the secretion is suppressed, and the breasts are empty and flaccid; in that case the head-symptoms are increased, and delirium often succeeds.

The TREATMENT consists in reducing the circulation, which in young and full-bodied women must be effected first by bleeding, and secondly, by saline purgatives, a low diet, a darkened room, and perfect quiet. Take of—

Epsom salts	2 ounces.
Powdered nitre . . .	1 scruple.
Tartar emetic . . .	2 grains.
Mint water	8 ounces.

Mix, and dissolve. Three tablespoonfuls to be taken immediately, and repeated every four hours, till the bowels act, and the heat of the body is reduced. Where the symptoms are urgent, one of the following pills should be taken with each dose of the mixture. Take of—

Compound colocynth pill	1 scruple.
Calomel	8 grains.
Ipecacuanha	3 grains.

Mix, and make into a mass, which is to be divided into six pills. If, after a free action of the bowels, the head-symptoms continue severe, the temples are to be cupped, or six leeches applied to each temple, a cold lotion of vinegar and water, or powdered ice, placed on the head, bottles of hot water to the feet, and, if necessary, mustard poultices to the thighs.

Concurrent with these remedies, the breasts are to be fomented with flannels dipped in hot water, the milk carefully drawn off by the nurse, or a breast-pump, still better, when it can be y a blind puppy, till such time d can be applied to the breast y. During this period, the oom is to be kept cool, and she pplied with only farinaceous warm, diluent drinks, such as r, or balm tea.

EETH.—The name popularly he first complete set of twenty which the gums of children are and which usually last till the fourteenth year, when they are y the permanent set of thirty-

T.—This valuable and highly grain, though unknown in this a food, is largely used in Ger- ly, America, and in the East; ossesses the advantage of grow- antly on land too poor for the of more valuable straw grains, an object of interest with the r colonist, as it crops well, and h in soil on which wheat or

THE MILLET PLANT.

starve. Millet flour makes a itious bread; it may be used purposes for which farinaceous employed, and is valuable as a the dietary of an invalid.

THE.—A broad, flat gland, lly known as the spleen, situated stomach, on the left side. See

MIMOSA.—The botanical name of a genus of medicinal plants.

MINDERERUS, SPIRITS OF.—Under this old-fashioned name, frequent mention is made in this work of one of the most useful of the preparations of ammonia; its medical name being "the liquor of the acetate of ammonia." The preparation under notice is a clear, colourless neutral solution, acting on the system as a diaphoretic and diuretic, according to the articles combined with it. The spirits of mindererus is prepared by dissolving carbonate of ammonia in vinegar, as long as any effervescence takes place. When the bubbles of carbonic acid gas cease to rise, the saturation is complete, and a neutral solution is the result, which is then ready for use. The dose of this preparation is from 3 to 6 drachms, though the usual form of employing it is combined with camphor water, antimonial wine, spirits of nitre, and syrup of saffron, as a fever mixture. The *liquor ammonia acetatis* is sometimes used as a cold evaporating lotion, and as a wash for the eyes; its chief action, however, is that which it exercises on the skin.

MINERAL ACIDS.—As we have already signified under Acid, there are three orders of these substances,—the animal, vegetable, and mineral acids. The mineral acids consist of the Sulphuric, Nitric, Muriatic, Arsenious, and the Nitro-Muriatic Acid, which see.

MINERAL WATERS.—We had intended to devote some space to the various subjects appertaining to this article; but as we must enlarge considerably on the subject of water in its proper place, and should run the risk of a needless repetition if we were now to enter on the elementary principles of that necessary fluid, we shall content ourselves in this place with a few general remarks on medicinal waters, and leave to a later number a full description of them, under the one head of Water, subdivided into Hard and Soft Water, Rain, River, Spring, Well, Artesian, Saline, and Chalybeate Waters.

Mineral waters are divided into several classes, and are named after the article with which they are chiefly impregnated, as the chalybeate, the saline, carbonaceous, and the sulphureous.

The articles most frequently found in solution in mineral waters, as they are called when differing in their characters from common fountain water, are iron, sulphur, magnesia, potass, soda, lime, and salt.

Though flowing over beds of minerals and impacted earths, simple water would glide past uninfluenced by the nature of the soil below, and remain pure; when, however, water *is* impregnated by any mineral over which it flows, it must first have become charged with some acid, which, acting on the earth or metal of its bed, forms a salt, which, more or less soluble, is taken up by the running water, imparting to it the smell and taste on which its name and character depends. This gas, so generally found in water, is *carbonic acid gas*, originally obtained from the different strata of chalk through which the water percolates before reaching the beds on which it subsequently acts.

Common salt, carbonate and phosphate of soda, sulphate of lime, carbonate and sulphate of potass, and sulphate of magnesia, are the salts found in greatest abundance in those mineral waters called saline. The temperature of these springs is generally above that of common water, and in some instances so much so as to necessitate their division into hot and cold. The most important of the saline springs of Britain are those of Epsom, Leamington, Bath, Cheltenham, and Harrowgate. Carbonate of iron is the principal mineral salt suspended and held in solution by the waters known as chalybeates; of these, though there are a great number in this country, the most celebrated for their medicinal properties are those of Tunbridge Wells, Askern, Harrowgate, Moffat, and Gillsland. Some of these are so strongly charged with sulphuretted hydrogen, that when first drawn it requires a very strong stomach to be able to drink the allotted quantity. The presence of this disgusting gas, which, when given off from an open sewer, we avoid as a pestilence, but when charged in the water, we take for medicinal purposes, and swallow, if not with pleasure, with unquestionable avidity, is accounted for on the theory of the decomposition of the neutral sulphates in contact with organic matter; and while the saline properties of the decomposed sulphates are dissolved by the water, the liberated sulphuretted hydrogen is given off in the form of fœtid gas.

We have already said that carbonic acid gas is the primary cause of all mineral waters, by enabling that liquid to act on the earths and metals over which it flows. This gas is found in a variety of substances in nature, and accumulates in such quantities in some waters, particularly in Germany, that they sparkle and effervesce like champagne. The waters of Carlsbad, Seidlitz, and some others, in Austria and Wirtemburg, are examples of these stimulating and sometimes intoxicating spas.

It is the presence of this gas that gives to spring water the sharp, brisk taste so much admired in water freshly drawn from a spring. Some of our best spring waters contain as much as fifteen or even twenty cubic feet of carbonic acid gas to every gallon. See WATER.

MINIM.—An abbreviation for the Latin word *minimus*, the least or smallest portion of anythng.

Professionally, the word is employed to signify a drop, or the sixtieth part of a drachm. A minim measure is a glass measure containing a drachm, or the eighth part of an ounce, divided into a scale of six parts, each part being further subdivided into ten.

The sign employed by physicians to designate these fractional quantities is an M made in the following manner,—♏.

MINTS.—A tribe of aromatic carminative plants, growing extensively in our kitchen gardens, and highly prized for their medicinal properties as well as for their culinary uses. The most important members of the mint or *Mentha* tribe are peppermint, spearmint, and pennyroyal. The active property of each of these depends on its essential oil, of which each variety contains a large proportion. The word mint, though applied generally to the whole three, properly and justly belongs to the *spearmint*, the article always referred to when mentioned in this work. The preparations of mint kept in the shops are the essential oil (*ol. menthæ sativæ*), and the water (*aqua menthæ sativæ*). As a carminative in flatulence or colic, a drop of the oil rubbed down on a lump of sugar, and mixed with a little magnesia and a wineglass of water, will be found extremely beneficial; while in fevers an infusion of the leaves makes a refreshing diluent beverage, much relished by invalids. See PEPPERMINT, and PENNYROYAL.

MINT-JULEP.—An esteemed American beverage, made by macerating mint leaves in sherry, then passing the flavoured wine and leaves through ice, till the whole has become impregnated with the mint aroma, when it is poured off, and regarded as a deliciously cool beverage, or stomachic cordial.

MISCARRIAGE.—The untimely bringing forth of a child. Few medical men are agreed as to the proper application of this term, each practitioner forming his own views on the subject. By some, a miscarriage is laid down as occurring before the twelfth week; according, however, to the advice given in this work, and the author's views on the subject, a miscarriage *can only take place* between the time of quickening and the period when a child, if born, would be capable of living; in other words, between the fifth and the end of the seventh month: the loss of the fœtus between the twelfth and sixteenth week—the most common period—is properly an *abortion;* and the birth of the child at any time after it has become *viable* (see LABOUR), and up to near the natural time, or from the middle of the seventh to the middle of the ninth month, is a *premature labour*. See ABORTION.

MISTURA.—The Latin for Mixture, which see.

MITHRIDATES' CONFECTION.—An electuary compounded by the renowned king of Pontus, who, being in constant dread of poison, invented this, as it was believed, specific antidote, which by taking daily, he so fortified his body that no poison, however subtle or potent in its operation, could affect his system. The confection of opium was formerly called by this name, from its supposed efficacy in many forms of disease.

MITRAL VALVE.—The anatomical name of a valve situated on the left ventricle of the heart, and guarding the entrance from the left auricle: this valve is so called from its fancied resemblance to a bishop's mitre.

MIXED FEVER.—A name given by hysicians to a fever uniting an inflammatory and a typhoid type in one disease; the symptoms, like the treatment, partaking both of those of a strong inflammatory fever, with the exhausting depression of typhus.

Fortunately such a compound disease is rare—at least, in its perfect state; we hall, therefore, pass it by as being a conition which must command the close ttention of a medical man to afford a hance of recovery in so complicated a isorder. See TYPHUS.

MIXTURE.—Any liquid form of medicine, taken internally, is so called, whether merely a collection of fluids, or containing substances which have to be first triturated, or rubbed down in a mortar. In the Pharmacopœia there are a few preparations under this head, such as the *mistura camphoræ, M. ferri,* &c., or camphor water, and iron mixture; but to these it is unnecessary to refer, beyond observing that the first is merely water impregnated with camphor, pieces of the resin being immersed in it, and the bottle securely corked, till the fluid becomes strongly flavoured with the camphor: this preparation, sometimes called camphor julep, is the article so often met with in this work under the name of camphor water, or camphor mixture.

MODIOLUS.—A bony protuberance in the temporal bone appertaining to the cochlea, or shell of the internal ear.

MOFFAT.—The name of a town in Scotland, somewhat celebrated for a medicinal spa charged with sulphuretted hydrogen, in combination with potass and other alkaline salts. The waters are esteemed for their efficacy in scrofula, chronic rheumatism, and skin diseases. See SAL POLYCHRIST, and HARROWGATE WATER.

MOLARES, OR THE MOLARS.—The double or grinding teeth, so named from their supposed resemblance to the molars or the stones of a mill. The most important of the permanent teeth, as they comminute and reduce to a pulp the food cut and broken down by the incisors and canine. See TEETH.

MOLASSES.—The dark, thick syrup which runs off from the packed sugar, and from which treacle is obtained. See TREACLE.

MOLES.—Small protuberances, often hairy, but generally of a greyish-brown colour, seen on the skin of persons, in various parts of the body, and always congenital, or from their birth. There is a species of internal mole, known among medical men as a "false conception," and found in the womb of females of all ages. The name, however, is highly faulty and objectionable, as such unnatural growth occurs in the uterus of females of irreproachable honour, and who have never been married. From their gradual enlargement, and the consequent distension of the abdomen they cause, the moral effect of such a disease on the patient's health and reputation is very severe. See WOMB, DISEASES OF; and MOTHER'S MARKS.

MOLLITIES OSSIUM.—A *softening* of the bones. This is one of the most extraordinary diseases to which the body is liable, but fortunately it is a very rare one; and though some constitutional predisposition seems to be necessary to lead to it, it has been clearly shown that the immediate exciting cause is, on the part of the patient, an inordinate desire for and consumption of salt. Mollities ossium may be regarded as a general condition of rickets, in which the bones of the *entire body* are seemingly deprived of their earthy particles—the phosphate of lime,—become little more than gristle, and, like a stick of indian rubber, can be bent into any shape the individual or his attendant may please to place them.

The disease, though gradual, is comparatively rapid in its progress: the legs first suffer from pain and weariness, and are soon unable to support the weight of the body; the patient, unable to stand or walk, is obliged to remain seated, when the large bones of the thigh and leg, having lost the counteracting weight of their earthy particles, are by the strong muscles of the hip and legs drawn gradually upwards, till, warped and distorted in an extraordinary fashion, they are finally crossed over the back of the patient's shoulders, the right leg to the left, and the left to the right side: the arms at the same time become similarly deformed, till the helpless patient is fixed like a hideous Mongolian idol, unable to move or even feed himself. See RICKETS.

MONKSHOOD. — The *Aconitum napellus*, sometimes the *Aconitum ferox*, or wolfsbane. This plant, so well known in our gardens on account of its fine purple flowers, is extremely poisonous, every part of it being equally deadly. All the varieties of the aconitum belong to the Natural order *Ranunculaceæ*. The only medical uses to which this plant is put are those of a sedative and anodyne: for this purpose the preparations mostly employed are the extract, the dose of which is from 1 grain to 2; and the tincture, from 5 to 15 drops, gradually increased. For the treatment of an overdose, see POISONS.

MONOMANIA.—A condition of madness in which the mind appears preternaturally excited upon one subject, being not only lucid, but perfectly rational on all others. The varieties of monomania which medical science is just now defining are far too numerous, and many others too absurd, for the notice of a work which aims at practical utility. Every degree of moral obliquity or social digression is now tortured into an hallucination of the mind, the result of organic derangement, till the very facts that were once deemed evidences of sanity are now perverted into symptoms of mental aberration. That cases of real monomania do exist there can be no question; but that every murderer, shoplifter, or thief, if he belong to the educated orders of society, is a monomaniac, or mentally diseased, as it is now too much the fashion to endeavour to prove, is more than our practical experience will warrant us in subscribing to. It is evident, therefore, that the treatment of monomania must in general bear more of a moral than a physical character; and even in the latter, no definite rules can be laid down for the cure of such a form of insanity. See MADNESS.

MONS VENERIS. — The hill or mountain of Venus; a name given by anatomists to the external parts of the pubis in the female.

MORBELLI. — An old name for measles; also a term much used on the Continent as a prefix expressive of several diseases, as *morbelli cadæus* (epilepsy), *M. cardiacus* (typhus fever), &c.

MORBID GROWTHS. — A term applied by surgeons to any excessive granulation, or structural enlargement of a part, tumours, &c. The growth or development, whatever it may be, is, however, always of a character agreeing, though in a diseased form, with the nature of the part from which it springs. Nearly every structure of the body is liable to this kind of diseased action. Sometimes they assume the form of fatty tumours, which spring up on the arm, shoulder, leg, or back, from the most trivial pressure, and often, without giving any pain, reach, in a few weeks or months, a size that necessitates their removal. Encysted tumours, sometimes containing hair, teeth, and other extraordinary formations, are also morbid growths. This class of diseased formations is distinguished by surgeons from another variety of morbid structures known as *malignant* growths, such as the diseased development called *fungus hæmatodes* and *carcinoma*, which, on account of their malignant action on the adjacent structure, require to be extirpated immediately, if it can be done with the chance of complete removal.

MORDANT. — The name applied to the substances used by dyers to fix their dye on the article coloured.

The mordant, or basis as it is called, has an affinity both for the pigment used, and for the texture submitted to its action. The most generally used mordants are the sulphate of iron and the acetate of alumina.

MORPHEW.—A scurfy eruption on

the face and body. See Skin, Diseases of.

MORPHIA.—The active principle of opium; an alkaloid salt, which, like quinine from bark, contains in an extremely condensed form all the sedative virtues of the drug from which it is extracted, without the *narcotine*, or narcotic principle.

Morphia is seldom used pure, but in combination with some mineral or vegetable acid, as in the following preparations of the salt,—the sulphate, muriate, acetate, and citrate of morphia; the dose of each being nearly the same—from a quarter to half a grain—either in a pill, or dissolved in a draught.

The advantage of the different preparations of morphia over opium is, that they produce pure sedative effects, without either stimulating or narcotic consequences.

MORPHIO.—The name of a disgusting little parasite, engendered by dirt and inattention to the condition of the skin, sometimes found infesting the hair on the body, and only to be eradicated by the warm bath, washing the part with a solution of chloride of lime, and by rubbing lard into the roots of the hair for a few nights, repeating the bath, and lastly the wash, till destroyed. See Itch.

MORRHUÆ OLEUM, but more properly **OLEUM JECORIS.** — The article commonly known as cod liver oil.

MORTARS.—These useful articles in the preparation of medicines, with their accompanying pestles, are usually made of iron, brass, marble, Wedgwood, or glass.

The iron pestle and mortar is only employed for the purpose of pounding different ingredients, or beating up masses of pills, so that the several articles may be thoroughly incorporated.

The brass mortar is only used for bruising or pounding such articles as would be discoloured by the employment of an iron one.

The marble mortar, in consequence of the extreme softness of the stone, must only be used for mixing powders, ointments, or smooth substances, care being taken that no mineral acid is put into it, for in that case the lime in its composition will be acted on, and the surface rendered rough and uneven.

The Wedgwood mortar, being composed of a material unaffected by acids, and of considerable strength, is for all purposes but that of hard pounding the cleanest and most convenient for all ordinary purposes, and as it can be obtained of any size, no medicine chest should be without one, as pills, mixtures, or powders may be prepared in it, a little potass or soda at all times easily cleaning it.

The glass mortar and pestle is only requisite when lunar caustic is being used, or a few grains of an article are required, as for the making of eye-waters, or small quantities of black or golden ointment. One mortar, however, will generally be found sufficient for the use of any family or emigrant's equipment, and that should be of Wedgwood. These are usually sold by the measure of their width across the mouth, the price depending on the number of inches. A 4-inch mortar will be found the most generally useful for a moderate sized medicine chest.

MORTIFICATION.—The total death of any part of the body, as gangrene is the partial death of a part.

Mortification may proceed from many causes: from extreme inflammatory action, from exposure, from loss of blood in the part, from the application of great heat, from accidents, and from the shock caused to the system by operations. Mortification proceeding from these causes is called symptomatic, as that from the debility of old age is called *idiopathic*. The first is known among medical men as the inflammatory, humid, or acute; and the last as the dry, chronic, or idiopathic.

The history or true pathology of mortification forms one of the most important subjects connected with the practice of surgery; and, as it may follow many accidents and diseases, demands not only a large amount of vigilance to detect its first approach, but practical skill in its management; indeed, to treat it fully a number would hardly suffice for its explanation. We shall content ourselves, therefore, by merely giving the general characters of the disease, and the most approved mode of affording benefit.

The cases of mortification most likely to fall under the observation of a non-professional person are those which result from severe bruises, where the limb or a part has been seriously crushed; from a long-continued pressure, such as a bandage; and from exposure to cold, or frostbite; and, lastly, the spontaneous mortification that frequently occurs in old people, from the loss of circulating power in the toes or feet. In all these cases mortification results from a loss of blood or vital energy in the part. Other cases occur where, as from burns or scalds, mortification follows from an excessive degree of inflammation.

SYMPTOMS.—The part gradually loses its warmth and sensibility, feels cold, moist, and inelastic; or, if the finger is pressed on the place, and a dimple caused in the flesh beneath, the depressed texture does not rise again to fill up the indentation. After a time the skin becomes marked with dull purple spots,. or lines of a dusky hue; bladders or small vesicles next rise on the surface of the cuticle, which eventually becomes black, and emits a fœtid odour; a line of demarcation now sets in, defining down to the bone, if it should be in a limb or member, the living from the dead part; while, if the death only affects a part of the flesh or integuments, a line is formed round the dead flesh and the living tissues contiguous.

The next stage in the process is the gradual throwing off of the mortified portion; a fœtid, ichorous discharge accompanying the process of complete separation, or *sloughing*, as the dead mass is called. When mortification follows inflammation, there is a rapid prostration of strength; the spirits are greatly depressed; the face looks careworn and shrunken; the pulse is small, quick, and feeble; the whole body is covered with a cold perspiration; and an attack of hiccough, more or less loud, proclaims the approaching death.

When the mortification is but trifling in extent, the constitutional disturbance is only slightly indicated. In the mortification of old age, cold and numbness in one of the feet or the hand is the first observable sign; this, however, is soon after followed by a small black spot, which makes its first appearance on the front of the great toe, or the point of the thumb; this soon spreads, till the whole toe, and at length the entire member, becomes of a livid colour. This discoloration usually comes on and progresses without producing any pain or inconvenience beyond the absence of heat in the part; occasionally, however, considerable pain is experienced: in either case, the system rapidly succumbs; the patient sleeps constantly, or falls into a lethargy, from which he can only be roused for a moment at intervals, till coma at length terminates the case with the life of the patient.

The TREATMENT in the inflammatory stage, when the patient is robust, must comprise bleeding and saline purgative *medicines;* but this must be adopted with great judgment, and the instant debility shows itself the *opposite* treatment must be adopted; rich animal foods, warm soups, with wine and hot brandy and water, as the case may demand, are to be given constantly,—the food every three hours, and the stimulants every twenty or thirty minutes; and should these means not be sufficient to rouse the patient from his increasing lethargy, such diffusible *stimuli* as the following are to be employed, given in small doses every quarter of an hour. Take of—

Carbonate of ammonia	½ drachm.
Aromatic confection .	2 drachms.
Camphor water . . .	4 ounces.
Compound spirits of lavender	2 drachms.
Compound tincture of bark	1 ounce.
Aromatic tincture . .	3 drachms.
Sulphuric ether . . .	1½ drachms.

Mix the first three articles in a mortar, then add the remainder, shake the whole well together, and give two tablespoonfuls for a dose.

From the first, bottles of hot water are to be applied to the feet, and a warm poultice to the part, to facilitate the separation of the slough.

In the mortification of old age, the strength is to be supported by the most nutritious food the person can take,—such as that advised above,—by rich farinaceous puddings, eggs, mulled wine and toast, or hot brandy and water. The foot or hand should be immersed in a stocking partly filled with a mixture composed of one part of dry mustard, with two of flour; heat applied to the feet in both cases; but when the hand is affected, a bag, filled with dry heated bran, should be laid above the stocking and the powder that surrounds the member, and, finally, the following mixture given at stated intervals. Take of—

Carbonate of ammonia	1 scruple.
Dover's powder . . .	½ drachm.
Peppermint water . .	5 ounces.
Aromatic tincture . .	1 ounce.
Sulphuric ether . . .	1 drachm.

Mix: two tablespoonfuls to be taken immediately, and repeated every four hours, or *one* tablespoonful every hour and a half.

In all cases of mortification, when the lethargy or sleepy feeling passes off, either 1-drachm doses of the compound tincture of bark should be given every two hours, or a grain of quinine, made into a pill with extract of gentian and crumbs of bread, should be given every six hours, and the strength kept up by food and wine, or spirits and stout.

During the sloughing of the dead mass, he poultices should be repeated every ew hours, the chloride of lime being ccasionally used between the poulticing o destroy the fœtid odour arising from the xudation of the slough.

MOTHER.—An old-fashioned name r the uterus, or womb.

MOTHER, THE, ABOUT TO BE-OME.—Great and remarkable are the anges and emotions which are con-antly taking place in the body of the oman about to become a mother. So any hopes, so many anxieties and fears e perpetually arising in the female mind such a time, that her whole frame be-mes peculiarly susceptible to all external fluences, rendering the mind extremely nsitive, and liable to receive strong and ten extraordinary impressions, more espe-ally from objects of pleasure or beauty; the same time, her antipathies are ex-ted in an equal ratio, and all objects of sgust or ugliness become intensified in eir features of repugnance. The Greeks, lly aware of this extreme sensibility of e female mind during the time of her egnancy, filled their houses and streets th objects of beauty and grace, in the rm of pictures, statuary, and works of oulded or sculptured art, that her eye, herever it turned, should take in nothing t images of grace, and give the mind ly themes of harmony on which to muse d study; a precaution we of the present e should do well to imitate more fre-uently than we do. The woman about become a mother, especially when for e first time, feels a mysterious change ing on in her physical existence: she els elevated in her social position, and periences an inward satisfaction from e knowledge that she is fulfilling the ties of her life, and anticipates with easure the responsibilities which the new inciple of life she is nourishing will oner or later call upon her to perform. here are many obligations which the oman about to become a mother owes th to her unborn infant and to herself; e most important of those obligations, in th respects, is a vigilant supervision er her own health, that she may have rength to perform her duties most fectively, and that she may bring into istence with safety, health, and perfect ganization, the child she is bearing. To velop a full-grown and healthy infant, the mother should be herself in absolute health; her food should be light, nutritious, and unstimulating; the mind should be kept in as equable and cheerful a state as possible; the muscles and organs of the body preserved in the due exercise of their functions by some bodily occupation, by exercise in the open air, by walking and other means, not fatiguing, but sufficient to promote a beneficial circulation of the blood; and lastly, by affording the child abundance of room for its natural expansion, and the increased volume of those parts in which it floats and carries on its primary functions. To insure this necessary benefit, ample room must be left, by loose dresses, for that increase of size round the waist that cannot, without suffering to the woman, and injury to the child, be restricted. On this account, all tight lacing, or obstruction to free expansion, must be carefully avoided.

The next precaution to be taken by the expectant mother, is to avoid all excitement both of the body and mind, as well as in all food or drink. From the changes always going on in the mother's system, the digestive organs are very easily disarranged, and from the pressure of the child a number of distressing symptoms are induced: from pressure on the stomach, either flatulence, heartburn, or indigestion are excited. To relieve the urgency of these complaints, the horizontal position, with loosening of all the strings of the dress, will often afford relief; but when active duties compel an opposite position of the body, a few grains of carbonate of soda in peppermint water, or 15 or 20 drops of sal volatile in camphor water, may be taken from time to time, or a piece of lump magnesia may be eaten; and when the acidity or heartburn is a very constant symptom, relief will always be found from eating dry rice, either whole or broken. For the indigestion, a wineglass of camomile tea, or infusion of colombo, with 10 grains of dried carbonate of soda, may be given twice a day.

When the pressure of the child is backwards on the bowels, it produces more or less of constipation, and often piles. When the bowels are only slightly confined, a little rhubarb and magnesia will generally be sufficient to induce an action; when more obstinate, however, a spoonful or two of the lenitive electuary, or 2 drachms of manna, are to be given. When, however, still more active means are necessary, half an ounce or 6 drachms of castor oil should be taken at bedtime; half the quantity, if required, being repeated the next morning.

All strong or forcing purgatives are to be carefully avoided during the whole period of pregnancy, especially aloes. An injection of warm soap and water, salt and water, or simple warm water, should, during the last few weeks, be preferred to any other means; and, if properly employed, will be found quite as effective as any medicine, without any risk of bringing on the labour. At such a time, indeed through the whole last half of her pregnancy, the female should avoid all opening medicine if possible, and endeavour to obtain the effect desired by other means; for this purpose a few stewed prunes, figs, a raw apple, oranges, or baked apples or pears, or, if desired, a Seidlitz powder, with an extra drachm of Rochelle salts in it, will be found to act most effectively. One of the most irritating results of pressure on the bowels, especially in the latter portion of the pregnancy, are piles; when these are external, or to be reached by inserting a piece of lint; either a strong decoction of gall-nuts, or the extract of lead, is used for the purpose of reducing their size; the lead, however, will be found generally to be the most useful, especially if the lint is well wetted with it before applying. Warm water injections, after small doses of castor oil, will be found the best practice in these cases. For a more complete treatment, see article PILES. When the child presses forward and downwards on the bladder—as it occasionally does in the last month—it produces an involuntary discharge of the water, most distressing to the patient to endure; the best relief in such cases is for the patient to lie on her back, with the hips slightly raised by the pillow of the sofa: the female so affected should at the same time take the precaution of keeping the bladder empty, so as to prevent, as far as possible, the recurrence of so disagreeable an accident, which can only happen when the bladder is full, or nearly so. The pains in the head, faintness, spasms, and many other symptoms appertaining to this state, with morning sickness, we must leave for consideration under Pregnancy. What it behoves the expectant mother most to remember is, the avoidance of tight lacing; the taking, up to the last day, an abundance of exercise, but not violent or fatiguing; to be sufficiently clothed; keep the skin of the whole body perfectly clean and dry, by baths, friction, and dusting; by accustoming herself to eat a sufficiency of light, unexciting food, avoiding late hours, heated rooms, or stimulating drinks; take her breakfast *before rising*, when the sickness in the morning is severe; and when the legs swell, wear a girth or suspensory bandage to support the abdomen, and have the legs rubbed with the hand night and morning; and finally, to give herself frequent rests during the day, by lying on her back on the sofa, the legs being slightly elevated. See PREGNANCY, and ADVICE TO WOMEN.

MOTHER'S MARKS, or *Nævi Materni.*—These disagreeable and often very offensive-looking blotches, tumours, or blemishes, which the mother unconsciously entails on her child, are often as extraordinary in their appearance as they are diverse in their shape and situation. Physiologists have long disputed the popular belief that such formations have any relation with the mother whatever, and, rather than resign their opinion or prejudiced theory, are content to evade the subject, under the convenient but unscientific shelter of a *Lusus Naturæ*. Without disputing any opinion, or advancing any hypothesis to sustain our assertion, we shall content ourselves with adhering to the evidence of our own experience, and maintain our full belief that the quickened imagination and sensitive condition of the nervous system of a pregnant woman of a peculiar temperament is, at certain stages of her gestation, sufficient to impress on the unborn child those blemishes which are popularly known as mother's marks; and we can only marvel how a medical man who has had any experience in his profession, and who has used his eyes and exercised any reflection, can possibly have any other opinion on the matter.

There is hardly any part of an infant's body on which these extraordinary marks have not been, and do not daily appear; though, unfortunately for the child, especially as it grows to maturity, they are most frequently met with where they are the most evident, and consequently objectionable,—the face, neck, and bosom. Of these three situations, the face is generally the locality where the most severe, as respects size and character, are to be found. The forehead and eyebrows, the eyelid and part of the eye, the nose, the lips (and, when the mouth suffers, producing hare-lip), with the cheek, are the situations where these *nævi* are most frequently seen.

Some of these disfigurements are slight blotches or stains, quite superficial, and affecting only the skin, and may be mere discoloured spots, or, as in what are called port wine or claret stains, involve the whole of one side of the face and nose with irregular margins or stray spatters. Some, again, though not rising above the surface, involve the adjacent cellular tissue, while others protrude in the form of warts or moles, with a few bristly hairs, or else form irregular bladder-looking tumours, while some take an almost exact resemblance to the outline of a mouse, the surface being covered with a short brown fur. Another variety of the *nævus* is what is called the *varicose*, or a collection of small veins, freely anastomosing or uniting with each other, till they form a perfect *plexus* or network of interlacing and intermingling bloodvessels. Small patches of such *varicose nævi*, about the size of small wafers, are found on a child, one often situated at the inner or outer corner of the eye; but more generally such marks are found on the arm or leg, and then they are of a very considerable size.

The colours of mother's marks are nearly as various in their hue as their shape or size. Some are bright scarlet, others of a deep red; some few are black; but the most general colour is that of a purplish red: some, indeed, are hardly to be distinguished from the natural complexion of the skin except by their elevation. Not the least remarkable circumstance connected with *nævi* is the fact that all of hose which are of a *deep red colour* are ingularly influenced by any violent motion of the mind, becoming distended nd much brighter in colour during a fit f rage or any strong excitement, great eat of the weather, and during the aroxysm of a fever,—whatever, indeed, ccelerates or disturbs the circulation. t such times, many of those *nævi*, of a esicular or bladder-like character, with thin cuticle, burst, and not unfrequently ischarge a very considerable amount of lood. In female subjects, the *catamenia* very frequently discharged both from he kind we have just described, and articularly from the varicose variety; nd this not occasionally, but periodically or years. Among the various shapes hich mother's marks assume, the likeess to fruit is a very common one: pears, pples, strawberries, mulberries, and urrants are the most familiar; these re often traced as accurately on the arm, leg, body, or face, as if they had been photographed on the skin. Fruit, of whatever sort, while simply drawn, as it may be, on the cuticle, if out of sight is harmless and innocent enough; but if, as is sometimes the case, the grapes, mulberries, or currants are defined in what may be called alto-relievo on the skin, and are prominent, it is another remarkable fact, that during the natural season of the fruit, the *nævus* resembling it on the body will, during the last weeks of ripening, enlarge, and become excessively, sometimes intolerably, painful. In robust, masculine constitutions this fact is less evident, but in nervous and delicate habits it frequently amounts to extreme suffering.

TREATMENT. — This at best is only uncertain in its results, and in many cases defies either medical or surgical aid. Warts and moles, the simplest form of mother's marks, can always be destroyed by judiciously touching them with lunar caustic twice a week, for, if too frequently applied, there is a probability of stimulating their growth.

A *nævus*, in the form of one or a cluster of small berries, is sometimes found attached by a strig of cuticle with bloodvessels to the lips, ear, or other part of the child: a ligature tied round this strig will in a few days cause the excrescence to fall off, when touching the part where it hung with caustic will effect a cure. Pressure and cold lotions have been the most general and the most successful modes of treatment adopted for *nævi* generally; and in many cases, where the pressure by bandage and compress, enclosing a piece of coin, can be early adopted and steadily persevered in, it is undoubtedly one of the best means to eradicate projecting marks, the discoloured skin being afterwards destroyed by caustic. In adopting this plan, care must be taken to increase the pressure by degrees.

For the varicose *nævus*, when it is large, there is but one way by which it can be removed, and that is by extirpation with the knife of the whole congeries of vessels. For the small varicoses of the cheek or corner of the eye, the application of the annexed ointment, carefully applied twice a week, will in almost every case effect a cure. Take of—

Nitrate of silver (lunar caustic)	1 drachm.
Spermaceti ointment .	4 drachms.

Powder the caustic in a glass mortar, and thoroughly mix the ointment: a piece about the size of a pin's head should be placed on the centre of the part, and a pledget of folded lint laid over it, the whole being secured by a bandage, care being taken that the ointment does not enter the eye. In all cases, if a cure is to be effected, the *nævus* should be treated as soon as the child has strength to bear the treatment.

MOTOR MUSCLES.—A set of muscles which move the eyeball; the name also of the sympathetic or third pair of cerebral nerves, commonly called the *motores oculorum*, which are entirely distributed on the motor muscles of the eye. See Nerves.

MOUTH, THE.—The cavity containing the tongue, the palate, gums, and teeth. Externally the mouth is made up of all the muscles of the face, being shut in on the sides by the *zigomaticus major* and *minor*, the *massetor*, *buccinator*, the *levator* and *depressor anguli oris;* and on the front surrounded by the *orbicularis oris*, an oval-shaped muscle, which acts like a sphincter, contracting to the centre, but different from the other sphincter muscles in the fact that this one is voluntary.

It is this muscle, and a certain amount of adipose tissue between it and the cuticle, which forms the opening into the mouth, and those expressive features, the lips. On each side of this orbicular muscle are situated the levator and depressor of the upper lip and nostril, and the levator and depressor of the lower lip; in all, there are *ten* sets of muscles entering externally into the construction of this wonderful and mobile feature, the interstices between each muscle being filled up with adipose tissue, giving that round and smooth character to the whole face so indicative of youth and health. Complicated as the external arrangement may appear, it is comparatively simple when compared to the elaborate and complex disposition of the parts within the mouth. We have alluded to the teeth, gums, tongue, and palate as some of the organs contained in the mouth; these, however, form but a part of the important organization that makes up the wonderful whole. Lining the margin of the bones of the upper and lower jaw is that peculiar structure, different from all other tissues of the body, the gums, which not merely forms a lining to the bones and a firm bed for the teeth, but adds to the beauty of the face by filling out the mouth, materially assisting in the utterance of our words, and performing a necessary part in the operation of mastication. Connected with the gums below is one of the most delicate membranes in the body, covering a series of small salivary glands, whose ducts pierce it in all directions, pouring out, when required, their streams of saliva. These glands — the sub-maxillary — lie between the muscles of the throat and the lining membrane of the mouth. Above, the gums are connected with that corrugated structure which, like the cieling to the rafters of a room, forms the concave top of the mouth—the soft palate. The palate, which commences at the gums of the upper jaw, runs backwards in an oval arch till on a line with the root of the tongue, when it falls down like a valance, sending off on each side a curtain-like process, with what may be likened to a large tassel hanging midway between each curtain. The space between these two curtains is called the *fauces*, or the jaws of the gullet; the two curtains, one on each side, are the *tonsils;* and the tassel of flesh that hangs in the centre, dividing the space into two arches, is the *uvula*. See Digestion, *cut*.

Between the muscles and the lining membrane of the mouth in each cheek is situated a large irregular salivary organ, which runs back to the joint of the jaws; these are the *parotid glands*, the great salivary reservoirs, their ducts or tubes piercing the lining membrane in the centre of each cheek. The tongue, which forms the moveable floor of the mouth, covers another set of small salivary glands, called the *sub-lingual*, and which, next to the parotid, are the most important of the whole salivary system.

Where the common integument of the body—the skin—terminates, at the outer margin of each lip, commences that beautiful tissue which, from the mouth downwards, lines the whole alimentary canal —the mucous membrane. This membrane, so thin in parts as to show the colour of the vessels beneath—as in the red of the lips,—covers the muscles of the mouth and palate, envelops the tongue, and, after lining the palate, tonsils, and uvula, proceeds to invest the pharynx, where, splitting into two portions, one proceeds to the larynx, and descends the windpipe to line it and the bronchial tubes, while the other, in the like manner, proceeds along the œsophagus, or gullet, to line the stomach and bowels. See Teeth, Tongue, Palate, and Salivary Glands.

MOUTH, DISEASES OF.—As the

mouth is only a part of the great digestive system, connected not only by nervous sympathy, but by its lining membrane, with every part of the alimentary canal, it is not at all remarkable to find that it is liable to several diseases. Some of these affections are peculiar to the age of infancy or childhood, others to adult age.

Stomatitis, or inflammation of the mouth, is alone divided into six separate forms of disease; we shall, however, confine ourselves to one or two of the most important affections of this part met with in infants and adults.

Membranous Inflammation, or *Muguet*, or Millet.—This form of disease makes its appearance by a sort of abrasion inside the lips, soon covering the mouth and tongue with a crop of minute white points or spots, giving the tongue the appearance of being covered by a creamy-looking membrane. Sometimes, however, the eruption has a yellow or reddish appearance, owing to the presence of bile or the exudation of blood.

The *treatment* of this form of inflammation, when slight, consists in wetting the eruption with gum water, and giving some cool aperient medicine. When the case is more severe, the mouth is to be washed with a weak solution of chloride of lime twice a day, or borax and water, if preferred, and a pill, composed of equal parts of compound rhubarb and blue pill, three times a day, with a Seidlitz powder in the morning.

Ulceration of the Mouth, or Canker, is a disease of so serious a nature, that no non-professional person would treat it with any chance of benefit; but as it is, fortunately, extremely rare, we shall omit further mention of it here.

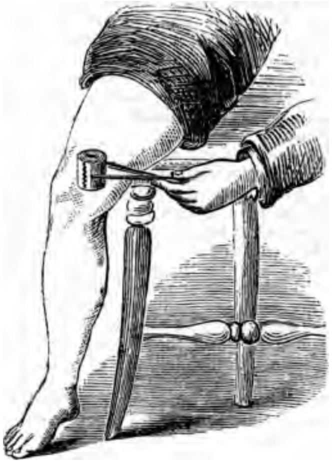
The mouth is also sometimes subject to small aphthous ulcers, one or two appearing at a time inside the lip, between it and the gum, under the tongue, or at the corner of the mouth or inside the cheek. These ulcers, though small, are extremely sitive, smarting severely, especially hen any substance comes in contact th their surface. The cause of such inful ulcers is generally great heat of dy, dyspepsia, or a confined state of the wels. The best form of *treatment* is cover them twice a day with a few ains of grey powder, take a couple of mpound rhubarb pills night and morng, or an ounce of castor oil at bedtime, d half an ounce the next morning. me medical men touch the ulcers with caustic, or a solution of bluestone, but the pain of the remedy is often worse than that of the disease. See Thrush.

MOXA.—A sort of down, or Indian moss; a substance used by the Chinese as a means of counter-irritation in certain chronic diseases for which all internal remedies fail in effecting either cure or benefit. The moxa, as employed in this country, consists of a quantity of fine cotton down, firmly compressed in a circular form, bound round by two or three circles of an ordinary bandage doubled down, and the edge firmly sewed to the previous folds. Both sides are then to be cut smooth with a sharp knife, till a flat circular mass, about an inch and a half deep, is left, as shown in the following cut.

The cotton down at one end of this roll is then to be lighted, and the opposite end placed on the affected part; an assistant then grasps the roll of moxa with a pair of long forceps, curling tongs, or any contrivance which will keep the moxa steadily on the part. The surgeon then takes a small pair of bellows, and directs a gentle and steady stream of wind on the top or smouldering end of the moxa, so as to obtain, without producing a flame, a full red glow of fire. This he is to continue till at least one half of the moxa is consumed, or as long as the patient can endure the pain; care being taken that the moxa does not slip off till the operation is finished, and that the fire never comes in contact with the patient's flesh. As soon as the operation is completed, and the roll removed, a pledget of lint, three or four times doubled, is to be wetted with warm water, and applied to the inflamed part, which is to be dressed in this manner for five or six hours.

The *rationale* of this operation is that the heat driven by the force of the bellows in the form of steam on the part above the disease acts as a powerful stimulant and counter-irritant, and as the warmth is at first only slightly perceptible, from the careful manner in which the moxa is kept alight, the heat is gradually increased, and the patient by that means enabled to endure a much greater amount of heat than he otherwise could possibly tolerate.

As a counter-irritant, the value of the moxa in cases of stiff joint, chronic rheumatism, sciatica, and some other affections, is not to be surpassed by any other species of counter-irritant. The effect of the moxa is nearly equal to that of the actual cautery, without the suffering and the loss of tissue caused by that agent; it is far superior to the potential cautery, while its effects are much more permanent than those produced by either mustard plaster or the ordinary blister, and the pain caused by its application is by no means severe. Though the true moxa is made of the leaves of an Indian plant, the common cotton down or wadding answers the purpose fully as well.



APPLICATION OF THE MOXA.

MUCILAGE, OR GUM WATER.—This article, so largely used in medicine as a demulcent in coughs and colds, is merely a solution of the finest gum arabic in hot water, the consistency being that of oil. Mucilage is also used in pharmacy for the purpose of rendering castor oil miscible with water; for this purpose the mucilage must be thick, and the oil added to it in a mortar, by a few drops at a time, till a white, smooth, and creamy mixture is obtained.

MUCILAGINOUS DRINKS, or, as they were anciently called, *ptisans*, consist of decoctions of mallow, gum water sweetened with sugar candy, gruel made with sago, tapioca, arrowroot, or oatmeal, and such drinks as simple and compound barley water, rice water, or any demulcent infusion or decoction. See DRINKS.

MUCOUS MEMBRANE. — This *membrane*, like all the other tissues of the body, consists of a number of minute cells, in which the soft, glairy secretion is contained from which it derives its name.

The mucous membrane commences at the lips, nostrils, eyelids, and ears, and after lining the several organs from which it starts, unites at the back of the mouth, or in the pharynx. One portion, descending through the windpipe and bronchial tubes, finally terminates in the air-cells of the lungs; while another proceeds down the œsophagus, or gullet, lines the stomach and the whole length of the alimentary canal, and finally ends in the outlet of the bowels.

Another mucous membrane commences in the chalices of the kidneys, and, lining all the cavities of that organ, descends through the ureters to the bladder, from whence, in the female, it sends a process to the uterus, and eventually terminates in the pubic region.

MUCUS. — A thick, glairy fluid, secreted in the cells of the mucous membrane, but differing very materially in its characters, according to the situation of the membrane and the function it has to perform. Mucus chemically consists of albumen, water, and some alkaloid salts.

Though naturally thin and transparent, like water, disease produces remarkable differences in its character. Thus: inflammation either makes the secretion thin and acrid, excoriating the cuticle on which it falls, or thick, ropy, and viscid, or compact, granular, and lumpy. At other times it is discharged from the bowels in the form of a flaky deposit. The mucus discharged from the eyes, apart from the secretion of the lachrymal glands, is peculiar to that organ, and that from the ears is distinct in character, while the discharge from the nose, called the *pituitary* secretion, is still more distinct and peculiar. See NOSE, and PITUITARY MEMBRANE.

MULBERRY.—The *Morus nigra* of the Pharmacopœia. This well-known exotic plant, though introduced into this country from China, Persia, and other parts of the East, on account of its fruit, is not used in any form of medical preparation, though the fruit alone, or its juice, made into a beverage, forms an agreeable, cooling, and very refreshing demulcent drink in all cases of fever or constitutional disturbance.

MULBERRY CALCULUS.—A name given by anatomists to a peculiar kind of stone found in the human bladder, which being nearly circular, and full of indentations or cavities, gives that irregular and

appearance on the surface from
its name has been derived. See
ʀʏ Cᴀʟᴄᴜʟɪ.

LLET.—A very delicate and nu-
ɪ fish, of which there are several
ɪa. The most esteemed, however,
e grey and the red mullet; the
appertaining to the waters of this
y, and the latter to the Mediterra-
the shores of the Levant, and
rn Italy.
mullet is one of the salt-water fish
flesh, as already stated, is so bene-
) the invalid, or persons requiring
, nutritious food.

LTI-CUSPIDATI, or Many-
d.—A name given by anatomists to
able teeth; in fact, to all but the
eeth, or incisors, the fangs being
cuspidati; the canine, the bi-cus-
or two-pointed; and the molars,
lti-cuspidati. See Tᴇᴇᴛʜ.

M.—A fermented malt liquor, made
vheat instead of barley, and much
ed on the Continent, particularly
nswick, where the best is made.

MPS.—This disease, almost exclu-
confined to children, consists of an
ment of the lymphatic and salivary
of the neck, constituting what,
medical men, is known as *cynanche*
leæ. The swelling generally takes
ear the angle of the lower jaw, and
it is articulated with the upper jaw,
metimes causes such an enlarge-
nat the distended gland hangs down
bag; in general, however, the
are only partially distended, though
r pressure on the tonsils they cause
ifficulty of swallowing and partial
s. Mumps is generally attended
degree of inflammatory fever, and,
severe, is accompanied with short-
f breathing, hot skin, and other
symptoms. Sometimes the swell-
ldenly disappears, as in gout, and
its appearance upon some other
' the body; this is regarded among
l men as an unfavourable symptom.
Tʀᴇᴀᴛᴍᴇɴᴛ of mumps, in its
and most general form, consists in
ing the neck with a hot bran
e, rubbing into the swollen glands
orn and oil, or camphorated oil,
a day for five minutes at a time,
pplying the hot poultice directly
sing either of the above liniments.
umps almost always arises from
arity in the child's system, or
old, it is always necessary to give
perient medicine. For children under six years of age, a few spoonfuls of infusion of senna and manna (see Mᴀɴɴᴀ) will generally be sufficient for the purpose, especially if the dose is repeated for two or three times. When the child's age exceeds six years, it will be necessary to give something more constitutionally effective, such as one, two, or if necessary three of the following powders.

Take of—
Powdered jalap,
Scammony, of each . 24 grains.
Cream of tartar . . . 1 drachm.
Mix thoroughly, and add—
Grey powder,
Antimonial powder, of
each . . . . . . 12 grains.

Mix, and divide into 6 powders; one to be given every morning, or every second morning, according to their effect on the bowels.

MURIATE.—A chemical salt, composed of muriatic acid, and some mineral or earth as a base. Muriates are divided into the metallic and earthy. Of the first there are the muriates of iron, antimony, and mercury, &c., and of the second the muriates of baryta, soda, ammonia, &c.

By the modern chemical nomenclature, muriates are now called chlorides; and what was formerly known as the sub-muriate of mercury—calomel—is now designated the proto-chloride of mercury; and the muriate of soda—common salt—is now known as the chloride of sodium.

According to the amount of muriatic acid—spirits of salt—a muriate contains, it is called a *super* or a *sub*-muriate, the first containing a larger, and the second a smaller proportion of acid. The word super is, however, almost exploded, and the term oxy-muriate now substituted for it, as in the instance of the bi-chloride of mercury — corrosive sublimate, — commonly called the oxy-muriate of mercury.

MURIATIC ACID.—One of the mineral acids, commonly known as spirits of salt, professionally as hydrochloric acid, and chemically consisting of chlorine and hydrogen gas. Muriatic acid, entering into combination with metals or earths, forms those salts and compounds known as muriates.

MUSCÆ VOLANTES.—Flying specks. A term used by physicians to express the motes, clouds, and other imaginary bodies supposed to be seen by a patient when labouring under some cerebral oppression, particularly when the optic nerve is affected.

MUSCLES are the flesh of the body,

and what may be called the superstructure of the bones. It is by the power of the muscles that every motion of the living body is performed. The muscles are composed of bundles of muscular fibre, of a tubular shape, closely bound together by cellular tissue, and possess what is called the property of contractility when stimulated into action by nervous or other stimuli.

The muscles of the human body are of various sizes and shapes, according to the duty they have to perform, and the situation in which they are placed. Some are long, round, and cylindrical; others are short and thick; some are almost square, and others triangular; while some, again, like the *platysma myoides* in the neck, are so delicate in their structure that they can with difficulty be separated from the cellular tissue, over which they are expanded like a cobweb. Muscles are divided by anatomists into the voluntary and the involuntary, or those under the control of the will, and those which act against it. Every muscle has two extremities,—the one where it takes its origin (or the head, as anatomists term it) from a bone, and the other where it terminates, or the end, commonly called the tendinous extremity of the muscle, and which, inserted in another bone, serves, when in operation, to produce some action, either alone or aided by other muscles. Muscles are the moving organs of the body, its source of locomotion, and, by their size and number, constitute the great bulk of the frame, giving to it form, elegance, and symmetry. On the limbs they are long, round, and cylindrical; and on the trunk, broad and flat; and in every place serve as a pad and covering to the bones.

MUSCULAR PAINS.—The muscles, like other parts of the body, are liable to inflammatory action, both acute and chronic. When the former, the disease is called rheumatism, demanding a treatment in accordance with the local or general character of the inflammation present. The muscles of the abdomen are more liable than those of any other part to severe spasmodic pains, arising most generally from the application of cold or wet to the part; or the pains may be sympathetic, proceeding from colic, the presence of irritating substances in the bowels, or from the action of poisons.

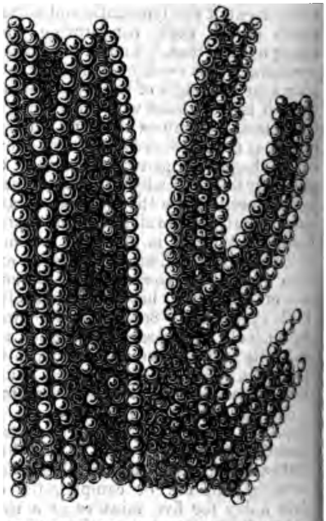
In these latter cases, though warm flannels should be laid from the first across the belly, the cure can only be effected by removing the cause, by aperient medicine or assafœtida and ammonia. But when the muscular pains proceed from cold, the best and most expeditious remedy is a hot bath, rubbing the following liniment, night and morning, over the part, and taking a dose of 30 drops of laudanum in a wineglass of peppermint water.

Take of—

Olive oil	½ ounce.
Oil of amber	½ ounce.
Hartshorn	½ ounce.
Opodeldoc; or, Compound tincture of soap	1 ounce.

Mix, and form a liniment.

MUSCULAR TISSUE.—This tissue the basis of the whole muscular system is, in regard to its importance, considered as the second of the primary tissues of the body. Like the cellular tissue, which is the basis of all the other membranes of the frame, the muscular tissue consists, in its elementary form, of a series of globules placed in parallel lines, in this respect being directly contrary to the cellular membrane, in which the globules run in intersecting lines.



ELEMENTARY VIEW OF MUSCULAR TISSUE.

The muscular tissue is arranged in two different modes; first in masses, forming what are properly called muscles, and

r, in thin, membrane-like expan-
nominated muscular coats.
nuscles consist of numerous bun-
fibres, each fibre of an indefinite
of hair-like filaments, each bundle
s being bound together by fine
tissue. Thus, the elementary
all muscular tissue, examined
he microscope, is composed of
globules, running in parallel lines,
nected by cellular membranes;
ich series of parallel globules form
nt, or muscular thread; thousands
threads, bound together by more
membrane, make a fibre; and a
de of such fibres, united in a cellu-
th, compose a bundle, or fascicu-
ral fasciculi making up a muscle.
RE, and FILAMENT.
te muscular expansion, or mem-
hich forms the muscular coat of
sels, &c., the fibres are arranged
ly, for instead of being collected
les, or fasciculi, the fibres are dis-
layers, and interlace.

HROOM.—This wholesome edible
botanically known as the *Agaricus*
ris, belongs to what is called the
amic order of plants—an order
lds all the esculent mosses, and
le.

are two varieties of the edible
m; the one growing in low or
meadows, and the other, called
mpignon, growing on dry soils
nds.

rue mushroom is always to be
ished from the toadstool, or poi-
fungi, first, by the smell, which is
nd slightly aromatic, but never
inodorous, which is the case with
e fungi; next, by the cuticle,
smooth and white, or brown, and
ys be peeled, the covering coming
strips, and exposing the fibrous
cture; thirdly, the under surface
e mushroom is disposed in layers,
lls, which are either of a pale pink,
brown, or of a purplish black
ccording to the age of the plant
mount of ketchup in its cells; and
e stalk is always short and thick,
the mushroom is large or small.
nly special difference between the
mushroom and the *champignon*
he fact that the under surface of
er, instead of being pink, is of a
white colour.
condiment to animal food, mush-
ither stewed or made into ketchup,
h grateful and wholesome, but, from their richness, are articles that no invalid or dyspeptic patient should venture to partake of, either stewed or boiled. In Russia, where the finest mushrooms in Europe are grown, they form, from their abundance, an important article in the dietary of the people. See POISONS.

MUSK.—An odoriferous animal secretion—the *moschus moschiferus* of the Pharmacopœia. This highly prized and beautiful perfume is obtained from the musk ox, being contained in a small sac near the scrotum of the male animal, in the same manner that the civet is obtained from the civet cat. The old physicians regarded musk as a valuable antispasmodic in hysteria, and all epileptic and nervous diseases, and as a stimulant in the last stage of typhus fever. Its price, however, and the antipathy patients expressed to its use, threw it out of practice, and it is now very seldom employed. A tincture (*tinctura moschi*) is the only preparation now retained in the Pharmacopœia, and that is more frequently used as a perfume than as a medicine.

MUSSELS.—A well-known shell-fish, which, when perfectly fresh and lightly boiled, are a light and nutritious article of food. From whatever cause—for the cause has never been clearly traced,—the mussel is, however, more frequently hurtful to the human system than any other kind of fish, producing colic, nausea, pains in the head, and vomiting; all the symptoms, in fact, caused by an irritant poison. When such is the case, an emetic of ipecacuanha should be given directly, the stomach emptied as soon as possible, and a few drops of sal volatile and water, with 5, 10, or 20 drops of laudanum, according to the age or strength of the person, given when the vomiting has subsided. See POISONS.

MUSTARD.—*Sinapis alba et nigra*, or the black and white mustard seed. The plant that yields this universally-known condiment belongs to the same order—the *Cruciferæ*—that yields all our cabbages and horseradish. Though both varieties are used in medicine, it is only the black mustard whose seed is ground for culinary and domestic purposes. Both varieties contain a large proportion of fixed oil, upon which the pungent properties of the plant entirely depend.

MEDICAL PROPERTIES AND USES.—Mustard acts on the system as a stimulant, stomachic, emetic, diaphoretic, emmenagogue, and externally, as a rubefacient and blister.

Though exercising so many effects on the body, mustard is seldom given internally, except in circumstances of emergency as an emetic; though, in cases of a languid appetite, and a cold, torpid state of the stomach, small doses of powdered mustard—from 15 grains to a scruple—taken an hour before dinner, will often prove very beneficial. In Scotland, the white mustard-seed, taken whole, is very largely employed by females as an emmenagogue, the dose being a dessertspoonful twice a day; and if the precaution is taken of plunging the feet in hot water at bed-time, the remedy is most effectual. Externally, the powdered mustard is used as a stimulant in paralysis, and as a counter-irritant in many diseases; and either alone or with flour, is made into a poultice as a rubefacient, and sometimes, but alone, is used as a blister.

MUSTARD LINIMENT is made by shaking up an ounce of flour of mustard in a pint of turpentine, for a few days setting it aside for the mustard to fall to bottom, and then pouring off the clear liquor. This is a very strong and stimulating liniment, and when applied, care must be taken to cover the hand used in rubbing it in. It is very useful in old rheumatic affections.

MYELITIS.—Inflammation of the substance of the spinal marrow, as *encephalitis* is inflammation of the substance of the brain.

MYODES PLATISMA.—A fine, delicate muscular expansion, which extends all over the neck, on both sides, and reaches from the angle of the jaw to the collar and breast bones below. This fine expansion lies between the muscles proper to the neck and the cuticle; and in the lower animals, as the horse and dog, is the muscle by which the coat of the animal is corrugated, as seen in that quivering of the coat so frequently observed when the horse is irritated by flies. In man this muscle—though more evident in the neck than on any other part—is at best but in a rudimentary state, and, like the muscles of the ear, only very rarely found existing in a developed form.

MYO-GLOSSUM.—A name given by anatomists to a pair of small muscles in the substance of the tongue, and by whose operation that organ is bent upwards in a curve to the roof of the mouth.

MYO-HYOIDEUS.—A muscle of the mouth, assisting in filling up the bottom of the mouth, between the base of the tongue and the inside of the lower jaw.

MYOLOGY.—A history of the muscles as osteology is a history or description of the bones, or skeleton.

MYOPIA.—A surgical name for a peculiar disease of the eye, resulting in purblindness.

MYRISTICA.—The botanical name of the plant which yields the mace and nutmeg, and belongs to the Natural order *Myristiceæ*. See Nutmeg.

MYROBALANS.—Dried fruits of the plum family, resembling the Egyptian date, and formerly much esteemed by physicians as a dietetic and medicinal agent.

MYRRH.—The resinous exudation from an Arabian tree, botanically known as the *Balsamodendron myrrhæ*. A small, shrubby tree, belonging to the Natural order *Terebinthaceæ*. Though a native of Arabia, the myrrh tree grows in Abyssinia, on the coast of the Levant, and in many parts of Persia and the East Indies.

Characters and Medical Properties.—This valuable incense and resin is not only a perfume of great aromatic delicacy, but a medicine of considerable efficacy. Myrrh is procured in tears, or masses of a deep red colour, transparent and brittle, having a rich aromatic odour, and a warm, pungent, and slightly bitter taste; is used medicinally as a tonic, antispasmodic, emmenagogue, expectorant, and antiseptic, and is also employed as a dentifrice. There are only three preparations of this drug now in the Pharmacopœia,—the tincture (*tinctura myrrhæ*), the compound tincture (or *tinctura aloes et myrrhæ*), the compound pill (*pilula aloes et myrrhæ*, or *pill rufi*, as it is commonly called). It also enters into the composition of the *mistura ferri*, or iron mixture, and the compound tincture of benzoin, or Friar's balsam.

The tincture, mixed with water, if made sufficiently strong, is employed as a gargle in cases of ulcerated sore throat, scurvy of the gums, and some conditions of the fauces and gullet. Or it is used as a general wash for the mouth with the tooth-brush. The powdered myrrh enters largely into most of the best tooth-powders, or dentifrices, and sometimes is employed as a dressing to ill-conditioned ulcers. The dose of the powder when given as a stomachic, is from 5 to 10 grains, and of the tincture from 20 to 40 drops. The best form in which myrrh can be given, as an emmenagogue, is that of the *mistura ferri*, and the aloes and rrh pill: the dose of the former is an ce twice a day; and of the latter, one of 5-grain pills every six hours.

Myrrh has, from the earliest ages, been arded as a drug of the highest value, h for purposes of embalming, and as an ense in religious rites and sacrifices; and s one of those symbolical gifts presented the infant Jesus by the Persian Magi, en they worshipped Him at Bethlehem: precious balsam, as typical of embalm- , being significant of the death to be dured by Christ, expressive as the gold s of sovereignty, and the frankincense the godhead.

MYRTIFORM PROCESS, or *Corun- læ.*—A name given by anatomists to the mains of the hymen in married females, m a fancied resemblance it bears to rtle berries.

MYRTUS PIMENTA.—The botanical me of the West Indian plant which lds the berries known as allspice, or mento; sometimes called India or Ja- aica pepper. See PIMENTO.

N

N is the fourteenth letter of the English phabet. As an abbreviation, it stands s in No.) for the French word *nombre* mber); and as a numeral, for 9,000.

NÆVUS.—A natural blotch, blemish, disfigurement of the body or members a child; a mother's mark; any con- nital injury, stain, depression, or eleva- n, whether resembling animals, wine, fruits, born on the skin of the child. e MOTHER'S MARKS.

NAILS, THE.—What the hoofs and e horns of the lower animals are to eir progression and defence, the nails the hands and feet are to the ornament d protection of those parts in man: in th instances they are a part of the rmis, or cuticle, and, like the scarf- in, or epidermis, perfectly insensible. he nails are fitted into a fold or groove the true skin, and are composed of a ries of flattened cells, filled with a horny uid, secreted by a number of minute essels. As the fresh fluid is collected, it thrown out, becomes hard, and, taking p space, gradually pushes the nail for- ard, thus slowly increasing the length, r, as it is called, the growth of the nail. t its commencement the nail is very hin, but as it advances towards the point of the finger or toe, it gradually increases in strength and thickness; these properties it owes to additional layers of cells, and the hardening process caused by exposure to the air. Sometimes the epidermis which covers each nail binds it down so firmly that the nail eventually splits at its edges, causing short filaments to stand out from the side of the nail, the source of considerable irritation, pain, and annoyance: these fragments are called spring-nails, agnails, or hag-nails. These troublesome spiculæ can only be removed after frequent soaking of the nail in warm water, scraping away of the scarf-skin, and cutting off the projecting fragments with a pair of short, sharp scissors. The nails of the toes, from the pressure of the shoes or boots, are frequently forced to grow in so circular a manner that one or both sides are pressed into the flesh of the toe, into which they ultimately grow, causing both pain and lameness. Here, also, the nail must be well soaked, the cuticle scraped, the under part thoroughly cleaned, and the nail carefully cut where it grows into the quick, and the portion removed little by little. Much of the beauty of the hand and the character of the person is inferred from the manner in which the individual keeps his nails.

In some persons, where the skin is naturally of a bad organization, the nails will be coarse, ill-shaped, and ragged; but in general it is in the power of all to render, by cleanliness and attention, this portion of the hand neat and unobjectionable.

For this purpose they should be cleaned with a nail-brush, and only cut after washing the hands, when their horny texture has been softened by the water; at the same time the fold of skin at the quick should be pressed back with the towel, so as to prevent the epidermis encroaching on the nail. When discoloured, a clear transparency may be imparted to the nails, after thoroughly washing them, by rubbing each with a slice of lemon, and, after a short time, washing off the acid with cold water, and finally, drying them thoroughly. In cases where the nails are deformed or have been neglected, great improvement may be effected in time by a proper mode of trimming, by cleanliness, and the use of a wash made by adding to a quartern of spring water 2 drachms of diluted sulphuric acid and 1 drachm of the tincture of myrrh. The nails are to be dipped into this wash two or three times a day, for a few minutes at a time, then washed in clean water and dried. See Skin. The nails of the strong and robust are generally short and thick, while those of the slender and delicate are usually long and tapering; it is also a singular fact that the nails always grow long and thin during or after a prostrating disease. One of the external physical symptoms of a consumptive patient is the long, thin, and bent character of the finger nails.

NAPHTHA.—This highly inflammable bituminous spirit, or volatile oil, used at one time so extensively for the purposes of light, and burnt in lamps of a peculiar construction, is abundantly found in nature, both in Asia and America. In many parts of Persia, and on the shores of the Caspian Sea, large natural wells of this subtle spirit are constantly found, while in other localities it is discovered either floating over beds of asphaltum, or collected in reservoirs near them, into which it has percolated from the original source. Besides being found native and pure, naphtha is obtained by distillation from petroleum or bitumen, the Barbadoes tar of commerce. Naphtha is also obtained from coal tar, in the manufacture of gas, and also from the distillation of wood. Naphtha is a light, spirituous liquid, of an unctuous feel, a clear, yellowish, transparent colour, and of a strong, pungent, disagreeable odour; is chemically composed of carbon and hydrogen, and is consequently highly inflammable, burning with a strong, clear light, but emitting a dense volume of smoke. On account of the great risk attending its consumption as an article of light, it should, if used at all, be employed with great care; the lamp should *never be filled by candle light*, and the reservoir never more than three parts filled: the danger, in the first instance, arising from the probability of the vapour catching fire; and in the second, the expansion of the naphtha by the heat from the wick, thereby causing an explosion.

Medical Properties and Dose.—The action of naphtha on the system is very much like that of turpentine and ether; and it is usually given as a stimulant, antispasmodic, and expectorant; in some cases acting as a diuretic and diaphoretic. As a diaphoretic and expectorant, it has been employed in consumption and chronic bronchitis, the dose being from 5 to 15 drops, beaten up with the yolk of an egg or mucilage, two or three times a day. In rheumatism, lumbago, and muscular pains of the back, 5 drops on a lump of sugar, or in a little linseed tea, may be given every six hours, or it may be used with camphorated oil as a liniment for the back. Naphtha is sometimes inhaled, like ether, in cases of asthma or bronchial affections; about a drachm of the naphtha being poured on the hot water. See Inhaler.

Though a strong diffusible stimulant, naphtha is not a medicine that can be depended upon for exercising any permanent benefit.

NARCOTICS.—A class of medicines which induce drowsiness, stupor, and sleep: whatever drug deadens the sensibility, abates pain, and tranquillizes the system is a narcotic; the action of the whole class being direct and immediate on the brain and nerves. Though the above are the effects distinctive of this class of medicines, they yet possess a second action on the system—that of a stimulant,—but only when given in modified doses. From their general soporific effects they were formerly styled *hypnotics*.

The principal articles belonging to the narcotic class of medicines are opium, poppy, hemlock, foxglove, henbane, monkshood, belladonna, thorn-apple, Indian hemp, camphor, lettuce, meadow saffron, hellebore, Indian berry, saffron, and nux vomica.

Some of these are denominated simple narcotics, and some narcotic irritants. See Poisons.

NARCOTINE.—An alkaloid salt, discovered in opium, and one of its active principles. Morphia, the chief, is a pure sedative, while narcotine contains all the irritant properties of the drug.

NARD-SPIKE.—An odoriferous plant; a native of the East, and from the earliest ages esteemed for its grateful and aromatic odour. This beautiful flowering plant belongs to the Natural order *Valerianea*. Though formerly used as an antispasmodic in epilepsy and hysteria, it has long been excluded from the "Materia Medica" of this country, and is now only used to scent oils and unguents. So highly valued as a perfume was spikenard by the voluptuous Asiatics and Romans, that a pot of this precious ointment was thought an acceptable present for the Messiah.

NARIS, the Nostril; NARES, the Nostrils.—The Latin and anatomical name for the apertures and wings of the Nose, which see.

NASTURTIUM.—A well-known edible uit and condiment; a native of Italy, t thriving in this country, where it is ltivated for the sake of its gay flowers much as for its fruit, or seed capsules, hich, steeped in vinegar, make a very od substitute for capers. The nastur-um is a warm, stimulating condiment, d from being warmer than the caper is ten of great service to persons of a weak omach and languid appetite, if one or wo of the seeds are eaten some time fore dinner, and taken with it also, if ited to the food. In all such cases, the sturtium should be eaten with its vine-ar simply by itself, and on no account ith melted butter, unless, indeed, the omach is strong and the digestion tive.

NASUS, the Nose; **NASAL**, belonging the Nose, which see.

NATES.—The name used by anato-ists for the gluteal region, or buttocks, lso for two small eminences near the ptic nerve in the brain.

NATRON.—An impure carbonate of da; a species of kelp, found in nature oth in seams and as a natural efflorescence n the surface of the earth. Vast quan-ities of this most necessary salt were nciently procured from the sands of gypt, and used by the Egyptians as the rincipal article in the process of embalm-g. See SODA, and EMBALMING.

NAUSEA.—A preliminary symptom f sickness or vomiting, and after the ualms which follow a dose of emetic edicine, immediately precedes the spas-odic action of retching. Though a ere stage in the process of vomiting, hen induced by natural or medicinal eans—except in childhood, when sick-ess often occurs in a moment, without ain or premonitory symptoms,—nausea roduces a peculiar state of the stomach, hich re-acts immediately on the system, ducing certain changes and effects of reat consequence to the patient as re-ards the treatment of his case. It is to roduce this condition that medical men lways—except when from poison, or ome other cause, it is necessary to empty he stomach—give emetics. The loathing elt in the stomach, with the nervous epression and muscular relaxation that ttends it, is the effect desired; for the ystem, being thrown into that condition by the sickening sensation of the emetic, is then more easily impressed or acted on by the medicines necessary for the disease than it would have been in its usual health, or under the excitement of febrile action.

Though nausea is always referred to the stomach as the seat of the unpleasant symptoms constituting what we understand by that name, there can be no doubt that the nerves are, in reality, the seat of all the phenomena experienced, the stomach being only sympathetically influenced by the nerves, and not by the medicine taken.

Besides making the body more susceptible to the remedies given, nausea reduces the circulation, and by relaxing the muscles, renders the operation of reducing a dislocation or a rupture, and some other surgical duties, much more easy of performance.

Nausea, when it arises spontaneously, is sometimes relieved by lying on the back, and laying a cold or wet cloth on the stomach, while the feet are kept warm with hot bricks. 20 drops of sal volatile, or half a drachm of carbonate of potass or soda, 5 drops of hydrocyanic acid, or a teaspoonful of brandy, are remedies, any one of which may be taken in a little water; or in severe cases a small draught may be given, containing a quarter of a grain of the acetate of morphia.

NAUSEATING MEDICINES.—These are substances given by the physician to produce that stage of sickness known as nausea, without its after consequences of vomiting, when the object is to lower the circulation, and induce a state favourable to the speedy absorption of the medicine. The drugs usually employed for this purpose are tartar emetic and ipecacuanha, particularly the former. There are other means by which the same effect may be produced, but it is not always desirable to adopt them: these are the hot bath, when the patient is kept in it for some time, and bleeding in the upright position, and from a large opening, tobacco fumes, &c.

A teaspoonful of antimonial or ipecacuanha wine, given for a few times every half-hour, will effect the condition desired; or if the powder of either is preferred, 3 grains of ipecacuanha, or half a grain of tartar emetic, given every half-hour, will answer the purpose quite as effectually as the wine of either article.

NAVEL.—The centre of the body in a full-grown nine months child, and in the fœtus, the opening through which the navel-string passes from the liver of the child to the placenta or after-birth of the mother. The navel-string, umbilical cord, or *funis*, as this important part is differently called, is composed of a series of vessels—an artery, vein, nerve, and lymphatic tube—all loosely twined, like the strands of a rope, round each other, and varying in length from one to two feet.

It is through the medium of the navel-cord that arterial blood and nervous power from the mother is carried to nourish the fœtus, and the venous blood and impurities brought from it. The cord is sometimes every inch or so doubled upon itself in the form of a series of knots; this is a provision to allow of greater extension, without incurring the risk of making the cord tense.

With some children the navel-cord is remarkably short, and neither knotted nor twisted: when such is the case, it is certain to delay the labour very materially, and add considerably to the maternal pains, the shortness of the string preventing the head from descending freely, though the contractions of the uterus are strong, and no other impediment existing. After the birth of the child, and the new circulation has been established in the infant, the navel-cord is tied about two inches from the body, and then divided; in the course of a week or fortnight the fragment left sloughs or drops off, leaving, when it has been properly attended to, that closed but indented cavity known as the navel.

NAVICULAR.—From its resemblance to a boat; a name given by anatomists to two small bones, one situated in the wrist, the other in the ankle-joint.

NEBULÆ.—Clouds or specks on the cornea of the eye; an opacity of the cornea.

NECK.—That part of the body connecting the head with the trunk, and consisting of a pillar of bone, covered with muscles and integuments, with arteries, veins, and nerves traversing its length in all directions, while in front are the two great tubes, the windpipe and the gullet. Along this tract, connecting the peninsula of the head with the continent of the body, is extended that electric telegraph by which the intercourse between the brain and the stomach, and all the other great termini of the system, is carried on by those nervous wires by which thought, impressions, and orders of locomotion are conveyed from point to point, or to intermediate stations; and also the tubes by which air is conveyed to the lungs, food to the stomach, and impulse to the heart. The bony pillar which, from the shoulders to the base of the skull, supports the head, is composed of seven pieces, called the *cervical vertebræ*, each of the seven bones being separated from the other by intermediate cartilage, the whole firmly bound together by strong ligaments of all kinds; while a set of slender but powerful muscles, running up its sides, or in other directions, move the head or neck in every manner desired. On each side of the neck run upwards the carotid arteries, and downwards the jugular veins. In front, the bag of the pharynx divides into the trachea or windpipe, and the œsophagus or gullet; behind, in the bony sheath of the vertebræ, is contained the spinal marrow; while a number of salivary glands are situated in the sides of the neck and under the chin; and lastly, at the bottom of the neck in front, and partly hid by the top of the breast-bone, lies the thyroid gland, the seat of the disease called *goitre*. Such are the most important objects found in the neck. For the information of those who desire to be more accurately informed of the relative position of the chief organs, it will be sufficient to say, that from the front backwards, the first object found under the integuments is the thyroid gland; this partly surrounds the windpipe, which lies immediately behind the gland; separated from the windpipe by cellular tissue is the gullet, on either side of which runs the carotid artery, and outside of the artery descends the jugular vein; behind the gullet lies the vertebral column, surrounded by its muscles; and covering all these parts is a layer of adipose tissue, and finally the cuticle. For an account of each part, with the diseases to which it is liable, see the organs referred to.

The diseases to which the neck generally is subject are,—enlargement of the glands (for which see SCROFULA and MUMPS), and the disease called goitre; also a muscular pain on both sides, sometimes the result of rheumatism, but more commonly proceeding from cold. This complaint, usually called STIFF NECK, is best treated by hot fomentations and a stimulating embrocation of hartshorn and oil, or camphorated oil with hartshorn, the skin of the neck being first softened by a hot bran poultice for an hour or two, then well rubbed with the embrocation, and again poulticed, the heat being continued before and after each application, as long as any rigidity of the muscles remains, or there is any difficulty in

ming the head. Care, however, must
taken to keep the neck wrapped up
some time after discontinuing the
ultice and embrocation. The only other
ease of any consequence affecting this
t is wry-neck.

NECK, WRY.—A disease affecting
nerves supplying one or two of the
scles of the neck, in consequence of
ich the muscular fibres are thrown into
tate of spasmodic contraction, by which
ans the counterbalancing power of the
posite muscle is overcome, and the head
wn forcibly round on the affected side,
isting all attempts to turn it into its
ural position. Sometimes the head is
wn so completely round as to make
face look over the shoulders; at others
s pulled backwards and downwards, the
n resting on the shoulder, and the
uth being drawn partially open.

TREATMENT.—As no amount of blister-
, leeches, or external application can
r effect any benefit in this complaint,
management must at once be put into
hands of a surgeon, the only remedy
ng in the performance of a slight opera-
n.

Formerly it was the custom to divide
nsversely the fibres of the contracted
uscle, but since the discovery of the
cessful treatment of *strabismus*, or
inting, surgeons merely divide the
vous twig that supplies the affected
uscle, and thereby produce an immediate
toration of the head to its proper
sition, the antagonistic muscle at once
wing the head round.

NECROSIS.—A surgical term for the
olute death of a bone, or that condition
ich follows *caries*, or rottenness (other-
e mortification of a bone), and is in
n succeeded by exfoliation.

Necrosis seldom takes place at once
ough the whole extent of a bone,
erally attacking a part only at a time.
e bones most subject to necrosis are
tibia and *femur*, or leg and thigh
e, which in young scrofulous subjects
by no means an infrequent case. A
t of the bone becoming inflamed and
ious, causes a corresponding inflam-
tion in the soft tissues, and suppura-
n takes place in the parts above, result-
in sinuses, or the formation of fistulous
sages, through which, after a longer
shorter time, a scale of dead bone,
led an *exfoliation*, eventually finds its
y to the surface, and is discharged,
er which the thin and unhealthy sup-
ration, common during the process of separation and expulsion, becomes thick and healthy, and the passage and opening gradually heals. Sometimes there are three or four of such fistulous openings at one time on the same limb; at others, the healing of one is followed in succession by the formation of another, till the whole length of the bone has been traversed.

This tedious and very serious state is generally indicated by dull, aching pains in the limb, followed by swelling, loss of muscular power, great constitutional disturbance, and eventually an incapacity for all progression.

The TREATMENT consists in opening the abscesses as they form externally, making an aperture sufficiently deep and long to admit of the easy discharge of the matter formed, and, at the proper time, of the escape of the dead fragments of bone. Another object attained by making a free opening is preventing the pus from burrowing under the muscles. The nature of the mischief taking place at the bone can always be detected, whether the abscess has burst itself, or been opened by passing a probe into the aperture, when, if it is a case of necrosis, the probe will pass down to the bone, striking on what will feel like a rough, hard substance, a sure indication that the bone has lost its natural smooth *aponeurosis*, or fibrous covering. The medical treatment consists in enjoining rest and the horizontal position for the patient; dressing the openings with piline soaked in warm water, or warm bran poultices; supporting the strength by a generous diet, with stout or wine for beverage, and quinine mixtures, alternated with hydriodate of potass and decoction of sarsaparilla, with each, as a daily drink, every six hours. When the rest is disturbed, either morphia, opium, or laudanum, according to the nature of the case and the age of the patient, is to be given as a composing draught or pill each night an hour before bedtime.

NECTAR.—A grateful effervescing beverage, made according to different receipts, and highly esteemed as an agreeable cooling drink in summer time. One form of preparation is to macerate for four days, in two gallons of boiling water, half a pound of raisins bruised, one pound of lump sugar, two lemons, and the peel of one lemon; the whole is then to be stirred, filtered, and bottled, and after a few weeks will be ready for use.

Nectar makes a pleasant beverage for hot or feverish invalids.

NECTARINE.—A delicious fruit, of

the *Rosaceæ* order, and of the Peach family, which see.

NEPENTHE.—An old-fashioned name for an opiate; a liquid preparation of opium, most probably laudanum.

NEPHELÆ.—An obsolete surgical term for white specks on the eye; an opacity of the cornea: also used to express the white semicircular mark on the root of each nail.

NEPHRITIS.—Inflammation of the Kidneys, which see.

NEPHROTOMY.—The operation of cutting into the kidney, with the object of removing a stone or calculus too large to be passed along the ureter into the bladder. Such an operation was probably never performed; the old surgeons, who employed the above phrase, now obsolete, in all likelihood implied by it the performance of the high operation for stone.

NEROLI.—An elegant perfume, extracted from the flowers of a peculiar orange, small in size, but very aromatic, a native of Italy. Neroli is an essential oil, obtained by distillation from the orange blossoms, and far superior to the pungent article known as the oil of orange peel (*oleum aurantii*), and too frequently substituted for this delicate perfume.

NERVES, THE.—Nerves are small white cords, from the size of a crow's quill to that of the finest filament of hair; each nerve consists of a bundle of minute threads or fibres, bound firmly together, and enclosed in a sheath, each being distinct through its entire course, and terminating in the part or parts to which it is distributed, either by a free isolated extremity, or by a loop between every two fibres, or else by a close union (inosculation) of many twigs, forming a network of gossamer-looking fibres, like the arrangement of the bloodvessels. To give a popular idea of this important subject, it will be first necessary to describe what is meant by the nervous system, or, as anatomists denominate it, the CEREBRO-SPINAL AXIS; for merely to give the names and uses of the nerves, without explaining from whence they derive their source or origin, would be to omit the most interesting portion of the subject.

The power by which we are made conscious of all our senses,—that enables us to see, taste, and feel, to run, walk, or perform any action, however violent or trifling,—that sets the pendulum of life in motion, makes the heart beat, the lungs expand, the chest rise and fall, and finally conveys sensation to every part of the body,—is denominated the nervous system, and consists of two parts—the brain, and the spinal marrow. In reality, however, there is but one organ, which may be likened to a tall, straight tree, with a large expanding head or top: the stem of the imaginary tree represents the spinal marrow, and the top the brain. The brain, as the organ of the mind, is the immediate source of *volition*, and the part to which all impressions on the nerves of sensation are ultimately referred. The spinal marrow, on the other hand, being a mere continuation of the central base of the brain, is the immediate origin of nearly all the nerves, both of sensation and volition; both together forming the joint source from which all the nerves of sensation and voluntary motion arise, and *from* which the mandates of the will are sent forth, and *to* which the intelligence of the senses is conveyed. Modern anatomists deny that any nerves whatever arise from the brain,—though for perspicuity, and the facility of teaching, one set of nerves are still called the cerebral or encephalic system of nerves,—but, on the contrary, maintain that every set of nerves takes its origin from the spinal cord. It will be necessary, in this place, to observe that the spinal marrow consists of two equal halves, each half being composed of *three columns* of medullary matter, named, according to their situation, anterior, posterior, and lateral columns: it is from these three rolls or pillars of medullary matter—as at the base of the brain they assume that shape, and preserve it till they reach the bottom of the spine—that in reality every set of nerves in the body takes its origin, the property of each class depending on the column from which it rises: thus the *anterior* or front column gives origin to the MOTIFIC nerves, or nerves of motion, the means by which the various muscles of the body receive their power of action; from the *posterior* column arise the SENSIFIC nerves, or nerves of sensation; and from the *lateral* column we derive the RESPIRATORY, or nerves of respiration; while from a *union* of the nerves of the anterior and posterior columns we obtain what are called the regular nerves, or those which at the same time supply motific and sensific power to the muscles of the body.

The first thirteen pairs of nerves—for every nerve has a fellow—rising from the commencement of the spinal cord, either take their origin within the skull, or enter it fore starting for their respective organs: soon, however, as the spinal marrow completely passed beyond the bounds the skull, the nerves begin to rise on ch side of the column at regular and ual distances, that is, at every joint of e spine. To repeat, there are three dis- ct kinds of nerves,—those which preside er and govern the action of the muscles, lled the *motific*, or nerves of motion; ose by which we are made sensible of ternal objects, the *sensific*, or nerves of sation, and those which carry on the -important function of breathing, the *spiratory*, or nerves of respiration. As on as the spinal cord has left the skull, e nerves rising from the anterior and sterior columns of the cord (one on each le) unite, and send off nerves possessing e property of each column, or motific d sensific powers: by this simplification arrangement, one nerve, whether a anch or a filament, supplies the muscle which it is sent both with feeling and otion. This arrangement will be better derstood by perusing the following ble. Some anatomists divide the nerves into those rising from the brain, and those from the spinal marrow, or the cerebral and spinal. The first are comprised in the thirteen pairs of nerves of which we have already spoken, and whose names and numbers will be found in the first three columns of the opposite table.

NERVES OF THE SPINAL MARROW.

Anterior Column, or *Motific*.

Pair.
3 Motors of the eye.
4 Pathetic „
6 Abductors „
9 Lingual.

Posterior Column, or *Sensific*.

Pair.
1 Olfactory, smell.
2 Optic, sight.
5 Trifacial.
8 Auditory, hearing.
12 Hypoglossal, taste.

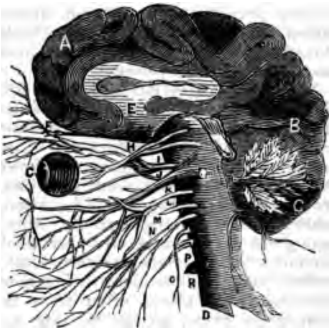
Lateral Column, or *Respiratory*.

Pair.
A branch of the fifth pair.
7 Facial.
10 Pneumo-gastric.
11 Spinal, accessory.
Intercostal, between the ribs.
Phrenic, midriff.

Anterior and Posterior Columns, or *Regular or Mixed Nerves*.

air.
13 Sub-occipital, sensation and motion.
7 Cervical, neck nerves.
12 Dorsal, back „
5 Lumbar, loins „
4 Sacral, hips „

The annexed cut shows a profile view of the brain, and the commencement of the spinal cord, with the roots, or relative situations of the thirteen pairs, or cerebral nerves, as they are sometimes called.



ORIGIN OF THE CEREBRAL NERVES.

A. Cerebrum. B. Cerebellum. C. Arbor vitæ. D and E. Medulla oblongata. F, H, and I. The optic nerve, 3rd, 4th, and 6th pairs of nerves. G. The eye. I. The facial, or 7th. K. The auditory, or 8th pair. L. The lingual, or 9th. M, N, O, P, and R. The 10th, 11th, 12th, and 13th pairs of nerves.

By this admirable system of the distribution of nervous power, provision is made for motion, sensation, and respiration. There is yet, however, another set of organs, hardly less important than the heart and lungs, yet to be provided; namely, all the organs of digestion, secretion, excretion, and reproduction. To supply each of these complicated but opposite structures with nervous vigour to perform their several functions, a new system was necessary; and this anatomists have called the *ganglionic* system, and physiologists, the system of NUTRITION. This additional order of nerves is formed by branches of the pneumo-gastric, or eleventh pair, which, uniting with certain *ganglia* (nervous glands or knots) in the head, descend along the neck, forming a union, as they proceed, with a ganglion formed on every set of nerves given off from the spinal column along the neck, back, and loins, till the termination of the column below the *sacrum;* this double chain of nerves and ganglia interlaces from both sides of the spine, forming a complete network of knotted nerves, to which the name of the great sympathetic is sometimes given. At different parts of its course, this ganglionic system sends off a web of delicate nerves to each organ encountered: these smaller congeries of nerves are called *plexuses*, and are named the renal, hepatic, lumbar, sacral, &c., according to the part each one supplies with nervous power; the last-named *plexus* sending branches to the rectum, uterus, vagina, bladder, pubes, and to both the gluteal and sciatic regions; in fact, to all the parts within the pelvis.

NERVOUS DISORDERS, OR NERVOUSNESS. — The diseases which properly appertain to the term nervous will be found elsewhere, under their proper heads of Hysteria, Epilepsy, Palsy, and some others. But that there are conditions of the body, in certain constitutions and temperaments, where, from great physical relaxation, the whole nervous system becomes preternaturally excited, and the individual suffers great trepidation and alarm, often from the most trivial cause, no medical man will deny; and though such a state of bodily agitation or depression does not amount to an actual disease, its consequences are sufficiently urgent to demand professional attention; when, in most instances, they will be found to depend on some deep-seated cause, and that cause must be first removed before any permanent aid can be rendered.

The low, nervous condition into which persons occasionally fall after a long illness, or without any assignable disease, can only be overcome by constant attention to the bowels, change of air and scene, by exercise (especially on horseback), by a strict attention to the diet, and by the use of the Bath, Cheltenham, or Tunbridge waters. It is in cases of this nature that hydropathy has often been beneficially employed. For the medical means proper for such cases, see VAPOURS, and HYSTERIA.

NETTLE.—This pest of the farmer, and universal occupant of barren ground, the *Urtica dioica*, is too well known to need any description. There are several varieties of the nettle plant, and all of them belong to the Natural order *Urticaceæ.*

The nettle, though now excluded from the Pharmacopœia, was formerly in high repute as an antiscorbutic, diuretic, and emmenagogue, and might still be used with great advantage, especially for the first-named purpose. The mode of employing it is, after collecting the youngest and tenderest leaves and shoots, and cleaning by frequent washings, to boil them slowly for twenty minutes, straining off the liquor, and when cold taking a cupful three or four times a day. Or they may be made into a kind of pottage, by merely covering the well-washed leaves with water, and simmering them in a closed saucepan till perfectly tender, and then eating them with a little salt, butter, and pepper, like spinach and turnip-tops. Such a dish taken daily for a week or fortnight, with or without the decoction advised above, will be found to act very signally in most cases of obstinate skin disease, scorbutic eruptions, or the livid spots and swollen limbs in scurvy.

Sometimes nettles are used externally, as a stimulant or counter-irritant, in cases of paralysis of the limbs, the part being gently filliped with a bunch of nettles, till an erysipelatous inflammation is induced on the skin. The acute smarting caused by the sting of nettles is owing to the acrid alkaline juice of the plant irritating the true skin, on which it is ejected in minute particles from the points or *spiculæ* of the leaves. A little vinegar, a solution of soda in water, or the extract of lead, will neutralize the acid of the poison, and always afford relief from the sting of nettles; it is on this principle that the popular remedy of the dock-leaf effects a cure, the alkaline moisture in the under part of the leaf neutralizing the acidity of the fluid emitted.

NETTLE RASH, OR URTICARIA.—A peculiar eruption on the skin, easily distinguished from all other eruptive complaints by the hardness of the pimples, and the intolerable itching that attends its appearance.

The CAUSE of this distressing affection can always be traced to the presence in the stomach of some indigestible, crude, or irritating kind of food, especially shell fish, such as shrimps, lobsters, and mussels, mushrooms, honey; and in infants to the impoverished or disordered condition of the mother's milk. The disease derives its name from the similarity of the rash to that eruption produced on the skin by the sting of nettles.

SYMPTOMS.—Nettle rash is characterized by the sudden, often instantaneous, appearance on the cuticle of a crop of small hard pimples, without heads, perfectly solid, rising in patches or weals, as if the part had been lashed with a whip. Sometimes the eruption continues in the same place for hours, but most frequently it disappears in a few minutes, and as rapidly as it arose, making its appearance in some other part of the body. The rash generally disappears in the daytime, and returns towards evening, now showing on the arm, presently on the chest, and again between the shoulders; in this manner often continuing for several days, or even weeks; it finally disappears by *desquamation*, or the scaling off of the cuticle. The slightest irritation of the skin from pressure or scratching will cause an immediate eruption on the part, with the accompanying itching, which in every instance of its coming out is one of its most trying symptoms.

The TREATMENT is remarkably simple, and may be described as embraced in the taking of a 4-grain blue pill at bedtime, and a black draught in the morning, for an adult; or instead of the last, half an ounce of Epsom, and the same quantity of tasteless salts (phosphate of soda) in a tumbler of cold water. For infants, if the mother is not disposed to correct her milk by a few doses of aperient medicine, one of the following powders may be given to a child of eighteen months, and half a powder to one of six, nine, or ten months old. Take of—

Carbonate of soda . . .	9 grains.
Grey powder	12 grains.
Magnesia	1 drachm.

Mix, and divide into six powders, one to be given every morning for two or three days in a little syrup, mixed in a spoon.

Nettle rash sometimes assumes a chronic form, when a Plummer's pill should be given nightly for a few times, with half a wineglassful of the decoction of serpentaria, and 10 drops of diluted nitric acid, three times a day.

NEURALGIA, OR NERVOUS PAIN.—The great distinctive feature of this disease is the acuteness of the pain which attends it; pain, however, is a symptom of all acute diseases, as well as being a distinctive one of all nervous affections. Neuralgia may attack any of the nerves of common sensation, or even those of organic life; the disease is also either idiopathic or symptomatic. The most familiar forms of *idiopathic*, or spontaneous neuralgia, are tic-douloureux, sciatica, and toothache, each of which will be considered in its proper place. The best examples of *symptomatic* neuralgia are the acute pains felt in the right shoulder in inflammation of the liver, in the arms in angina pectoris and affections of the heart, and the pains felt in the stomach and other organs when affected by acute disease. The pain in neuralgia can always be distinguished from that of any other description of pain, especially from muscular pains, by being neither *augmented by motion nor relieved by rest*, and by being unaffected by pressure,—unless, indeed, inflammation should exist at the same time.

NEURALGIA FACIEI, OR TIC-DOULOUREUX, may be taken as the type of these affections of the nerves, while its modern system of treatment may be regarded as the key to the method of cure adopted in all the forms of neuralgia. See TIC-DOULOUREUX.

The special nerves of sensation, or the nerves of the senses, are, like the nerves of common sensation, also liable to disease, resulting in paralysis, and loss of their perception or sense; thus, paralysis of the optic nerve, or deprivation of sight, is called *amaurosis;* of the olfactory nerve, or deprivation of smell, is denominated *anosmia;* of the auditory nerve, or loss of hearing, *cophosis;* of the gustatory nerve, or the loss of taste, *ageustia;* and a general loss of sensation, or what may be denominated a deprivation of touch or feeling, receives the name of *anæsthesia.*

NEURILEMMA.—The name given by anatomists to the external investure or sheath of the nerves.

NEUROLOGY.—The history, anatomical and physiological, of the whole nervous system; or a discourse on the nerves, as *osteology* is on the bones of the body.

NEUROTICS.—A class of medicines to cure the diseases of the nerves.

NEUROTOMY.—The operation of dividing a nerve, as performed in cases of squinting and wry-neck.

NEUTRAL SALTS.—All the saline salts are so denominated, when neither the base nor acid of their composition can be discovered, the one being so completely merged in the other as to yield a perfectly neutral product. Neutralization is the making neutral of any acid substance, by the addition of an alkali, till effervescence ceases, or by pouring acid on an alkali. For an example see MINDERERUS, SPIRITS OF.

NICOTIANA.—The botanical name of the tobacco plant, of which there are several varieties, such as the *Nicotiana*

Americana (the common American), *Nicotiana rustica* (English), and the *Nicotiana tabacum* (the Virginia, or finest species). See TOBACCO.

NICOTIANINA.—A concrete solid oil obtained from the tobacco, possessing all the active principle of the plant, but extremely powerful and dangerous.

NICOTINE.—A peculiar principle extracted from the tobacco leaf.

NICTITATION.—Winking; an affection of the eyelids. See WINKING.—*Membrana nicitans:* The membrane with which eagles and some other birds are furnished, by drawing which, like a hood, over the eyes, they are enabled to look directly at the sun.

NIGHT BLINDNESS.—A disease to which persons in certain latitudes are subject, from long exposure to the intense glare of a tropical sun, particularly when reflected from a white or sandy soil. The disease is characterized by a gradual dimness of vision as evening approaches, which usually terminates in total loss of sight during the hours of the night, no light but that of the sun affording the proper stimulus to vision. The disease is a species of paralysis of the optic nerve, a kind of amaurosis, and can only be relieved in the earliest stage by a change of situation, and a course of carefully given tonics, sea bathing, with local irritation when necessary, and the avoidance of strong sunlight, unless the eyes are guarded by opaque glasses.

NIGHT LAMP.—Among the many articles appertaining to the Sick Room (which see), the night light or lamp is one of the most important, certainly most necessary, not only as affording an immediate source of greater light when required, but, what is of far more consequence, supplying a certain amount of hot water in readiness for any emergency; or keeping food for infants, gruel, soups, or articles for invalids, always hot, or capable of being made so. As we esteem night lights much more in respect to their capabilities of affording hot water, tea, stimulants, and warm food, than as mere flames at which to light a candle, we shall divide these most necessary articles into four kinds,—1st, the table light; 2nd, common night light; 3rd, the Etna; and 4th, the night lamp.

THE TABLE LIGHT.—Of this light there are innumerable examples, from a mere atom of rush protruded through a stearine wafer, to an inch circle of composite or spermaceti candle floated in water. The first, or table light, the neat little article illustrated in our side-cut, has a wick, admitted by a metallic tube into a reservoir of camphine, and always gives a sufficient light, when placed on the mantelpiece, to show the relative situation of things in the room, and to be always a convenient centre at which to obtain a broader flame when necessary. A great advantage of this lamp in respect of economy is, that it may be burnt, if need were, for twenty-four hours, at a cost of less than one penny.

TABLE LIGHT.

The second, or COMMON NIGHT LIGHT, may consist of a rushlight or a candle, surrounded by a high shade perforated with holes, and overtopping the candle and flame. This apparatus is usually placed on the ground, or in a wash-handbasin, and is merely kept for the convenience of affording a larger light to nervous people when disturbed at night. It may, however, be easily converted into a portable grate for all the necessary purposes of heating water, by affixing a small kettle into the rim at the top, by which means, if nearly filled with hot water on going to bed, a pint or a quart of boiling water may be insured through the whole night, for the purpose of tea, hot brandy-and-water, or for poultices: an example of this lamp is shown above.

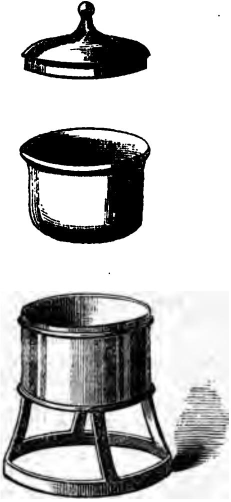
COMMON NIGHT LIGHT.

There are many invalids, however, who have a strong objection to a light in their rooms, and yet who may require coffee or t stimulant in the night. To such —and this may embrace the gene- ic—where an unexpected indis- suddenly calls for hot water in t, the **Etna**, or third form of night a very quick and useful one. paratus, made either of tin or onsists of a conical-shaped vessel, id, attached by its apex to a me- ıcer on a stand. The water, gruel, , or whatever the article may be, is the vessel, the lid affixed, and teaspoonfuls of spirits of wine into the saucer; the spirit is then h a match, when a flame imme- encircles the vessel on all sides, n the space of two, three, or five (according to the amount of fluid ated), is boiling hot. Care must ı only to put the amount of spirit l for each time in the saucer, ıantity being regulated by the t of fluid to be boiled; and if the has not been consumed by the time or water boils, the flame is to be out before removing the lid or pour- t the contents.

NIGHT LAMP.

ıore spirit should be required to he temperature desired, *care must en never to add more spirit to the till the first has been consumed, or me blown out.*

The fourth variety of **Night Lamp** is to the parent of a young family the most useful of all, and an invaluable assistant to the mother who has to rear her child or children by hand. The apparatus consists of a circular frame-work of japanned tin, supported by a hollow tube in the centre, the length of a long rush-light.



NIGHT LAMP, DIVIDED.

Into this is fitted a top containing a reservoir, with a white crockery pan, capable of holding half a pint of fluid; a japanned tin lid, to cover the pan and retain the heat, completing the whole.

The hollow tube is first to be filled with water; a rush candle, lighted, is then to be dropped into the tube, where it floats, with the flame a trifle above water; the top is then put on, a small quantity of water poured into the reservoir, the child's cold food placed in the pan and put into the water, and the lid fitted on the top. As the candle is consumed it gradually rises, so that a constant flame is kept under the reservoir, which, without boiling, keeps the water in it always at a considerable heat, melting and warming the food, so that when it is required for the infant, all the mother has to do is to remove the pan from the water, break the food with a spoon, and add the cold milk, so as to bring the whole to a proper temperature, when, according to the age, she can either pour it into a feeding-bottle, or give it the child with a spoon. See FOOD, INFANTS; BRINGING UP BY HAND, &c.

NIGHTMARE.—A distempered state of the mind, induced by indigestion, or the presence in the stomach of some crude and oppressive substance, which, acting by pressure or irritation on the nerves of that organ, causes those unpleasant and often frightful dreams that, for the time they last, exercise a most vivid impression on the disturbed sleeper. The symptoms, however dissimilar and aggravated, of this disturber of our nocturnal rest are too well understood to require description; and as it most frequently arises from distension of the stomach or from some substance oppressing that organ, the treatment can only be preventive, as far as avoiding the causes which induce it,—hearty or indigestible suppers, taken too short a time before going to bed: but as the brain and certain sympathetic nerves are affected by what has been taken, and are thereby made the immediate cause of these frightful dreams, a slight stimulant, in the form of a little sal volatile, brandy, or other spirit taken after supper, when a person subject to nightmare is obliged to go to bed before his meal has had time for digestion, will, by exciting the branches of the pneumo-gastric nerve, either prevent, or very materially modify, an attack of the nightmare. Sometimes this distressing visitor of the sleeper proceeds from pressure on the spinal marrow, from lying on the back in a cramped, uneasy position; in such cases the person should be careful not to fall asleep on his back or in a huddled or constrained attitude.

NIGHTSHADE, DEADLY. — The plant called the *Atropa belladonna*, or the "fair lady," a narcotic and poisonous plant, already fully described under its general name of Belladonna, which see.

NIGRITES OSSIUM.—A kind of caries or rottenness of the bones, in which the diseased part becomes black: a blackness of the bones.

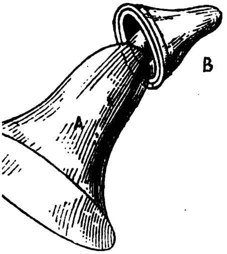
NIPPLE.—A delicate erectile tissue peculiar to the breast, forming the external duct or outlet of the mammary glands, and situated in the centre of a dark round disc, called in man the *areola*, from which it projects in the form of a small truncated cone. This delicate little organ undergoes several changes in the female, sympathizing in whatever affects the uterus. Up to the age of puberty in the female, the nipple remains in the small and rudimentary state in which it is found in men; but with the first catamenial discharge, and the enlargement of the bosom, the nipple assumes larger dimensions, becomes more prominent, and the areola a few shades darker and larger. These changes become still more evident from about the second month of pregnancy up to the birth of the child; the nipple then becomes larger and fuller, the areola much broader and of a purple colour, and seemingly studded with minute *papillæ*, or pimples, while both the areola and the nipple, if examined closely, appear porous, or full of little cells. At such times, both during pregnancy and the catamenial discharge, considerable irritation and itching accompanies the enlargement of the nipple. On this account, the condition of the nipple is regarded as one of the *signs of* pregnancy.

Though the nipple always enlarges during pregnancy, it sometimes happens that it does not properly rise or stand fairly out from the breast: sometimes, again, it never appears above the level of the surrounding cuticle; in both cases being held down by a fold of membrane called a *frenum*, or bridle. This obstruction has to be broken or overcome, either by the mouth of the nurse or the breast-pump, before the child can be put to the breast, for the infant has seldom strength to effect it, especially should both nipples be retracted. Sometimes the pain of drawing out the nipple is so severe, that the attempt has to be relinquished as impracticable, and the mother, in consequence, has to rear her infant by hand.

If the nipples cannot be brought out for the first child, it is seldom that either one or both can be made serviceable afterwards, though the attempt should be made after each confinement.

Mothers often suffer most acutely from what are called sore nipples, the lips as well as the gums of the infant causing excessive pain every time the nipple is drawn, the heat of the child's mouth, as well as the pressure, causing the suffering she endures. Excoriation, or a cracking of the nipples, is by far the most frequent injury to which this organ is subject, and this painful state is almost always caused by the mother's own neglect; first, by falling into the mistake that every time the infant cries it wants the breast, and by putting the nipple in its feverish mouth five or six times an hour, instead of giving it a few spoonfuls of water, or a dose of magnesia or manna; and secondly, from the great mistake of PUTTING UP THE

**ITH THE NIPPLE WET WITH
LD'S SALIVA.** Were suckling
o take the precaution to dry the
soon as it is withdrawn from the
outh, and at the same time
e the breasts alternately, sore
uld be very rare sources of dis-
to either mothers or nurses.
eping the nipple always dry, it
m time to time be dusted with
der, and on the first show of
s, that nipple should have as
; as possible, bathing it with a
tion of white vitriol, in the pro-
2 grains to the ounce of rose
ing it thoroughly, and then using
powder. To prevent the loss of
y injury to the breast from the
of the gland, it will be neces-
the mother to wear a shield,
hich the child may draw the
hout touching or wetting the
These shields are either thin
oxwood, on which a prepared
unted, or else they are made of
a socket, on which an Indian
pple is made to fix firmly, while
otion in all directions: the fol-
t gives an illustration of this
tector.



SHIELD, AND ARTIFICIAL
NIPPLE.

hield. B. Indian rubber nipple.

TE.—The name of an order of
osed of nitric acid, and a me-
line, or earthy base, as the
silver (lunar caustic), *nitrate*
, *nitrate of potass* (nitre),
soda, nitrate of ammonia,
lime,—all of the latter inflam-
explosive compounds.

TE OF SILVER. See SIL-

NITRE, NITRATE OF POTASS, or SALTPETRE.—This well-known article, though obtained from nitric acid and potass, is found in nature in an impure state on the surface of the earth, especially in the East Indies, from whence vast quantities are imported into this country, while on the continent it is obtained artificially from what are called nitre beds—large trenches filled with old lime and mortar, earth, offal from slaughter-houses, and vegetable refuse. The decomposition that takes place liberates the nitrogen from the animal matter, which, uniting with the oxygen of the air, forms nitrous acid, which then combines with the lime of the mortar, forming on the surface a cake of nitrate of lime; this from time to time is removed, dissolved in water, and potass from burnt vegetables thrown into the vats, when the nitrous acid, having a greater affinity for the potass than for the lime, unites with it, forming a solution of the nitrate of potass, the lime falling to the bottom of the vessel; the liquor is then filtered, evaporated, and crystallized, when the pure saltpetre or nitre is obtained.

We are indebted to the first Napoleon for this ingenious mode of obtaining so important an article; for when unable to procure nitre from abroad, from our possession of the seas, he appealed to the patriotism of the French chemists to devise a means by which he might obtain an agent so necessary to the dignity and safety of the country. The result was the above mode of artificial manufacture. Italy yielded the sulphur, their own forests the charcoal, and the nitre beds found the last ingredient in the needed gunpowder.

Nitre, when purified, run into bullet moulds, or cast in circular cakes, is called *sal prunella*. Nitre acts on the system as a diaphoretic, diuretic, and slightly as an expectorant. See SALTPETRE.

NITRE, SWEET SPIRITS OF.—This etherial spirit is a distillation made from spirits of wine and nitric acid, and is used as a stimulant, diuretic, and diaphoretic, and is of remarkable efficacy in all bronchial affections and severe colds attended with febrile symptoms.

The dose of the sweet spirits of nitre is from half a drachm to 1 drachm, either alone or in combination with the spirits of mindererus, or ammoniacal mixtures; or when required to act as a diuretic, may be given in the following form.

Take of—

Spirits of sweet nitre .	1 drachm.
Tincture of squills . .	30 drops.
Tincture of digitalis .	20 drops.
Ipecacuanha wine . .	1 drachm.
Camphor water . . .	1 ounce.

Mix: to be taken once or twice a day as a draught.

NITRIC ACID.—The strongest, most powerful and corrosive of all the mineral acids. Nitric acid, or *aqua fortis* (strong water) is extensively used in the arts and in medicine, at one time even more frequently than it now is. Chemically, this acid consists of two gases, in the following relative degrees:—oxygen, 5; nitrogen, 1.

Medical Properties and Preparations.—Nitric acid acts on the system as a stimulant, tonic, antiseptic, escharotic, and as a blister, according to the manner in which it is used, and the form in which employed. Among surgeons, the pure acid is used to destroy phagedenic ulcers, morbid growths, and unhealthy granulations, whether in the throat or on the surface of the body. For this purpose the acid is dropped on the part by means of a glass rod. The remedy causes intense pain, and on that account requires to be used most carefully. In hot climates, or in cases of emergency, nitric acid is sometimes used to produce a blister, when such an effect is required immediately. To effect this, a hole of sufficient size is cut out of a piece of adhesive plaster, which is then attached to the skin; a piece of cotton, tied to a stick, is dipped into the nitric acid, and as quickly as possible passed over that part of the skin within the shape of the plaster, when the cuticle is instantly raised in the form of a large vesicle or bladder. Nitric acid is too strong to be used internally; it is, therefore, always prescribed in the form of the

DILUTED NITRIC ACID, which is composed of one part, or ounce, of nitric acid to nine parts of distilled water, the dose being from 10 to 20 drops, either in barley water, infusion of quassia or colombo, or in a glassful of the decoction of sarsaparilla, dandelion, or dulcamara. In obstinate skin diseases, the use of nitric acid in any of the last three vehicles, and accompanied with the nightly exhibition of a Plummer's pill, will be found eminently serviceable; while as a tonic in chronic affections of the liver and stomach its use will be found equally beneficial. See SKIN, DISEASES OF.

NITROGEN.—An elementary gas, and *the great* animalizing principle of nature, forming the chief ingredient in the atmosphere we breathe, the basis of all nutrition (see FOOD), and the constituent element of all animal fibre, as carbon is of all vegetable matter. We have already shown, under the head of Food, that no animal body can exist for any length of time without nitrogen; and till the discovery of the chemical composition of vegetable foods, it was believed that graminivorous animals obtained that necessary constituent from the air they breathed. The knowledge we now possess—that many vegetables contain a large amount of nitrogen—explained, however, the fact in a much more satisfactory manner.

Nitrogen is a non-supporter of combustion or respiration, is colourless, and devoid of taste or smell, and enters into combination with oxygen in several proportions.

NITRO-MURIATIC ACID.—This is a mixture of spirits of salt and aquafortis, afterwards diluted with water for the safer use of the remedy as a medicine. The proportions used for this preparation are 4 drachms of muriatic and 4 of nitric acid, mixed with 9 ounces of distilled water, the dose being from 5 to 15 drops, in some fluid for a vehicle. It is given as a tonic in the same diseases as those for which nitric acid is employed, and in cases where the constitution has been debilitated by excess of mercury; for this purpose the nitro-muriatic bath is much employed.

NITROUS ACID.—This is a weaker kind of aquafortis, or nitrogen in a lower state of oxidation, the chemical equivalents being,—oxygen, 4; and nitrogen, 1 part; that of nitric acid being 5 and 1.

Nitrous acid is of a deep yellow, orange, or red colour, emitting dense suffocating volumes of orange red vapour when exposed to the air, and consists of nitrous gas loosely combined with nitric acid and water. This preparation is only used in the arts, and never in medicine.

NITROUS OXIDE, or LAUGHING GAS.—A protoxide of nitrogen. The extraordinary properties of this chemical compound of oxygen and nitrogen have hitherto only been employed as a means of amusement or experiment in lecture-rooms. The singular property of this gas is that it almost instantly draws forth the most prominent traits of the character of the person under its influence, and though, like other diffusible stimulants, it generally induces hilarity and laughter, in some cases it excites tears and sadness;

in all cases, however, the effects are transitory, seldom lasting longer than one or two minutes.

The nitrous oxide consists, chemically, of 1 atom or part of oxygen, and 1 part of nitrogen. With this proportion of oxygen the nitrogen is harmless, and yields what might be made a very beneficial medicine, while with an increased proportion of oxygen it becomes the corrosive and life-destroying articles called nitrous and nitric acids.

NOBILIS.—Noble, estimable, or excellent. A name given to certain metals and plants, from their supposed possession of such qualities. Thus, gold, silver, and platinum have been called the noble metals, as the camomile, and some other plants, are botanically designated noble, as expressive of their virtues.

NOCTAMBULATIO.—The same as below.

NOCTISURGIUM.—An old medical term for somnambulism, implying, "I shall arise in the night." See SLEEP-WAKING, and SLEEP-WALKING.

NOCTURNAL EMISSIONS.—An involuntary seminal discharge, occurring during sleep, generally the result of excited dreams, and often caused by dissipated habits and a relaxed system. This exhausting complaint is generally confined to the young, and, when not the result of vice, may be easily overcome by a course of tonics, local and general, such as the following:—1st, cold salt water bathing, or else sponging the body, especially the loins and hips, every morning with cold vinegar and water, with the after use of the flesh-brush; 2nd, a grain of quinine, made into a pill, taken twice a day, and 20 drops of the tincture of iron (*tinctura muriatis ferri*) in a cup of barley water three times a day; and 3rd, by taking 20 drops of laudanum on going to bed, when the case demands it. See article under letter V.

NODE.—A surgical term for the swelling of a bone, or a thickening of its periosteum, or covering membrane. These small, knobby swellings or enlargements generally take place on those bones which are least protected by muscles from blows or accidents, such as the shin, wrist, collar-bone, and lower jaw, and, though not always so, are most frequently caused by the specific stimulus of a venereal taint. See letter V.

NOISE IN THE EARS.—This is a symptom either of a distended stomach or a condition of congestion of the vessels of the neck and head, and in all cases should be attended to at once, especially in thick-necked and plethoric persons. When the stomach is the cause of the drumming, roaring, and other noises heard, the organ should be relieved by an emetic or purgative; and when it arises from fulness of the vessels, either local or general bleeding must be adopted to reduce the circulation, as explained under Apoplexy and Congestion.

NOLI ME TANGERE, or TOUCH ME NOT.—A name given by surgeons to a malignant growth, affecting the muscles and cuticle of the nose, mouth, and cheeks, and also occasionally occurring in other parts of the body. *Noli me tangere* belongs to the species of diseases known as the lupus; a kind of cancer, eventually destroying the tissues by the formation of a ragged ulcer of all the soft parts from the bone to the integuments. This disease is distinguished from cancer by the neighbouring parts *not* being affected by the absorption of the virus, as in that disease, and only spreading by immediate contact.

The TREATMENT lies in the internal and external use of arsenic, and the usual constitutional treatment adopted in cancer.

Noli me tangere is also the name of a plant, whose seed-capsules burst on the slightest touch, scattering their contents in sudden jerks.

NOMENCLATURE.—A set of words; a catalogue of the most useful terms in a language or a science. Medical nomenclature is a list of all the diseases to which the body is liable, arranged by different nosologists according to their own ideas of simplicity or usefulness. Though many forms of nomenclature have been adopted, both here and on the Continent, a perfectly scientific table of disease is still a *desideratum*. By the present system some diseases are classed from their most prominent symptoms, as fevers, from *ferveo*, to burn; *hydrophobia*, a dread of water; *diabetes*, a running away; and several others. Some diseases, again, are named from their seat, or from their seat and nature combined, as *hydrocephalus*, water in the head; *pleuritis*, *iritis*, &c.; the first portion of the word generally explaining the situation, as the *pleura*, or investing membrane of the lungs, and the *iris*, or curtain of the eye, and the termination, *itis*, expressing the inflammation or the kind of disease. See NOSOLOGY.

NON COMPOS MENTIS.—Not of sound mind, memory, or understanding, and signifies in law,—1st, an idiot; 2nd, one who, from disease or accident, has lost his memory; and 3rd, a confirmed lunatic. See Madness.

NON-CONDUCTORS.—A term given by electricians to all those articles which, in their natural state, will not conduct or carry electricity, such as glass, gutta percha, silk, and some other substances. The opposite to *conductors*.

NORMAL.—Original, natural. An organ is said to be in a normal state when, free from all disease or injury, it performs its function naturally and well; and *abnormal* when overtaken by disease, whether affecting the function or the structure of the organ.

NORRIS'S DROPS.—An old-fashioned nostrum, formerly much used in inflammatory diseases of the chest, and deemed beneficial in lowering the circulation. The drops were made by dissolving tartar emetic in spirits of wine, and then colouring the solution with red Saunders wood or cochineal, and resembled, in all but its colour, a more powerful antimonial wine.

NOSE.—The organ of the sense of smell. The nose is a feature adding greatly to the character and beauty of the face, and answering the purpose of a moral sentinel, watching over the welfare of the mouth and stomach. The nose also assists in the function of respiration, as will be presently shown. Anatomically, the nose consists of a framework of bone and cartilage, lined internally by a continuation of the mucous membrane of the mouth, but differing, both in its structure and the nature of its secretion, from the usual character and function of that membrane, while externally it is covered with the cellular tissue and integuments common to the face.

The framework of the nose is chiefly made up of the frontal bone, parts of the ethnoid and sphenoid bones, palate, maxillary, malar, by the nasal bones proper, and the vomer, the two nasal bones being placed in such a manner as to form a double coving roof, while a small thin bone, somewhat resembling a ploughshare, the *vomer*, is placed in the centre as a support, and forms the first portion of the parting wall, or *septum*, which divides the nose into two passages—the *nares*, or nostrils. Attached to the anterior edge of each nasal bone, and the vomer in the centre, are five small cartilages, called by anatomists fibro-cartilages, one in the middle, completing the *septum* or division, and two on each side, forming the sides or wings (*alæ*) of the nose. Each nostril opens posteriorly into the pharynx by an oblong aperture, one on each side of the back of the vomer. Besides the two openings of the nose, front and back, each nostril has two other channels of communication, one with the orbit the other with the middle ear; the first is the *lachrymal duct*, by which the tears are carried off by the nose, the other is the *eustachian tube*. Lining all the bones, cavities, and ducts forming the shellwork of the nose, is a soft, thick, highly vascular, and extremely sensitive membrane, sometimes called the *pituitary*, but more frequently the *schneiderian* membrane, upon which the whole of the first pair of nerves, the *olfactory*, having passed the apertures of the ethnoid bone, is entirely distributed, in the form of numerous *plexuses*. It is from the distribution of this nerve upon the spongy membrane just noticed that we owe the gratification of smell. The ordinary sensation of feeling is, however, imparted to the organ by twigs from the two branches of the fifth pair, or trifacial, called the *ophthalmic* and *superior maxillary* branches. It is these nervous filaments which are influenced by powerful stimulants applied to the nostrils, such as ammonia, and why the nostrils are affected by respiration, and also why, in suspended animation, we stimulate them in the hope of exciting a sympathetic action in the lungs.

When cold water is dashed on the face of an insensible person, it is the action of the nerves from those branches which produces the gasp and spasmodic action of the muscles of the face always observable under the influence of sudden cold. To keep the membrane of the nose always in a state of healthy action for the function of the olfactory nerves, a thick, pituitary secretion is exuded in greater or less quantity; but when from cold, or a too powerful stimulant, it becomes, to a certain extent, inflamed and thickened, the discharge at the same time becomes thin and acrid, often excoriating the nostrils and the cuticle of the lip on which it flows; and finally the passages leading into the pharynx becoming blocked up by the thickened lining causes that peculiar impediment in the speech so characteristic of a severe catarrh.

Accidents to the Nose.—From the prominence of the nose, and the extremely fragile nature of the bony anatomy of the part, the nose is very liable to injury from blows, falls, and accidents generally, the organ being not unfrequently beaten flat on the face.

The *treatment* in such cases is, after suppressing the bleeding, which is often very considerable, by cold applications; to cover the end of a penholder or pencil with a padding of lint, properly tied on; then grease the padded end with sweet oil, pass it up one nostril at a time, carefully elevating the depressed bones, while the finger and thumb of the left hand are used to mould or adjust the parts from without. Any laceration of the skin must be afterwards dressed, as the case may require, by slips of adhesive plaster. A frequent accident with children is the lodgment of peas, and other round articles, in the nostrils,—obstructions passed up in play, or the exuberance of juvenile mischief. In such cases, the flat end of a silver probe should be cautiously passed up the nostril, till it can be made to act from behind, when, if the substance cannot be propelled forward, it must be retained, to prevent its going higher, while with a small pair of dressing forceps the obstruction is to be grasped by their flattened blades, and brought down.

Bleeding from the nose (*epistaxis*) is a very frequent complaint, especially of the young in summer time, while in epileptic and apoplectic patients a sudden discharge of blood from the nose not only acts as a beneficial relief to the system, but often, by its timely aid, saves the person from what might have proved a fatal attack. In all plethoric individuals all such critical evacuations should be carefully watched, and on no account hastily suppressed. In ordinary cases, the patient should be laid on his back, with the head slightly raised, cloths, dipped in cold vinegar and water, laid across the nose and face; and when the hemorrhage is excessive, the nostril from which the blood issues should be plugged with a pledget of lint, to which a string is attached, by which, when necessary it can be pulled down; this pledget may either be oiled, or soaked in alum and water. The popular remedy of a cold key down the back is often very effectual; but in severe cases, a napkin, wrung out of some cold lotion, laid on the spine between the shoulders is always of the greatest service; hot water should be applied to the feet, and when the exhaustion is great, a little stimulant with sal volatile should be prescribed. See HEMORRHAGE.

NOSOLOGY.—A treatise concerning disease; a medical nomenclature, in which diseases are arranged according to their classes, orders, and specialities. Many scientific systems of nosology have been at different times framed by men of ability, both here and on the Continent. Dr. Cullen's nosology, from its extreme simplicity, long held the first position in this country. All of these systems have rested on some theory which time eventually proved faulty and objectionable. That arrangement by which all the diseases affecting the same part or structure are classed together seems the one which is the least artificial and the most practical, as by such a system the pupil has, at least, the advantage of being able to compare and contrast one disease with another. See NOMENCLATURE.

NOSTALGIA.—This is more properly an affection than a disease, and consists in an unconquerable desire which seizes on men of nervous temperament to return to their native homes, tempting them to brave every danger, and sacrifice all moral obligations, to gratify their longing to revisit their native land. The Swiss are remarkably subject to this infatuation.

NOSTRUM.—Any medicine not yet made public: a secret prescription, supposed to exercise a specific effect in all cases of the disease for which it is prescribed. The term nostrum is now generally applied to all patent medicines, or such articles vended with a Government stamp, whether pill, lotion, mixture, or drops. Many of these are composed of the most drastic drugs in the Pharmacopœia, and not unfrequently produce on delicate constitutions the most serious results. Out of the vast number of such quack medicines there are a few really excellent in their composition, and always safe and certain in their action. Such we have occasionally spoken of, and from our experience recommended, where their employment would be beneficial.

NOTHUS.—A Latin word, signifying false, bastard, untrue, and used by the old physicians to distinguish a disease of less severity from one of the same type but of more active features, or the true from the false, as in pneumonia *notha* from pneumonia.

Notha costa was a name given by former anatomists to the five false ribs.

NOXIOUS GASES.—Though all the gases with which we are acquainted would, if admitted into the lungs in any volume, prove deleterious to the system, it is only those which are commonly met with in nature as natural exhalations, or those generated by some process of fermentation, that properly come under the above designation.

The noxious gases given off spontaneously from the earth are carbonic acid and hydrogen, both pure and in combination. Carbonic acid gas is found in grottoes, old mines, disused wells, and coal pits. When occurring in the latter it is called *choke damp*, and when combined with hydrogen gas, forming carburetted hydrogen, *fire damp*, from its inflammable nature. Carbonic acid is generated in the brewing of beer, and collects in vast quantities in the empty vats. The weight of this gas, its specific gravity causing it to lie low, is often a source of great danger to labourers, when collected in deep vats or cellars; the incautious workman believing, if the light he carries burns clear on his own level, or a little below it, the air is everywhere pure, whereas the moment he stoops to his work, the deadly atmosphere he then inspires instantaneously deprives him of all consciousness, and he falls, often never to rise again.

On this account, no vat, long-closed well, or cellar should be entered till a lighted torch or taper has been lowered to the ground: if in that condition it should burn brightly, all is safe; if, however, it becomes dim, or goes suddenly out, the atmosphere is highly dangerous. In such a case, quicklime should be freely sprinkled, fireworks ignited and thrown in, or one or two flambeaux burnt in the vault before descending.

Nitrogen, sulphuretted hydrogen, and other combinations of noxious gases, are given off from drains, cesspools, or wherever animal and vegetable matters are collected in decaying heaps, rendering such places very injurious to the health of those compelled to live near their exhalations.

NOYEAU.—A beautiful aromatic French cordial, made with white brandy, the kernels of peaches, and sweet and bitter almonds, and then sweetened with lump sugar. The finest noyeau, both in strength and flavour, is made in the island of Martinique. This agreeable cordial forms a good vehicle for many unpleasant medicines, and is very useful to sweeten and flavour draughts and mixtures; and for culinary purposes, to give flavour to farinaceous foods, custards, &c., and for the invalid, it is invaluable. It is, however, unsafe to take it in any quantity as a mere cordial, from the amount of prussic acid contained in the kernels used in its manufacture.

NUCHA.—The back part of the head, or the nape of the neck. A word often used by physicians in their written directions to the apothecary in attendance when leeches, cupping-glasses, or a blister are to be applied to the nape of the neck.

NUMBNESS.—A loss of power, and partially of feeling, which may occur in any part of the body, or affect an entire side. When the effect of long exposure to cold, or a cramped position, a warm bath and friction will soon, by restoring the circulation, relieve the torpidity experienced; when, however, the numbness is caused by disease, it must be treated in accordance with the disease that has produced it: friction, however, and exercise, are the standard local remedies.

NURSE, THE.—The importance of the individual who forms the heading of this article, in a medical and social sense, would be sufficient excuse for introducing the subject in so domestic a work as the present; but having in more than one place already promised some special observations on a matter of such interest to the mother of a family and the mistress of a household, we are, in a measure, committed to the duty now before us, which, in its proper place, will be followed and supplemented by the Sick-room, and how to manage it.

To take the class generally, nurses may be divided into four orders, each having special differences from the other. Thus, there is the Common or Sick Nurse, the Monthly Nurse, the Wet Nurse, and the Nurse of the Nursery. However important a personage the individual of the latter order may be, or however responsible her moral duties as the deputy guardian of infancy and childhood, we shall leave her order out of the pale of our remarks, and confine ourselves exclusively to those whose members have the physical care of the old and young.

The Common, or Sick Nurse.—The following requisites of a good nurse, though given under the order of the sick nurse, are equally applicable to each of the others. In the first place, it is an absolute requisite that the nurse should possess good health, present and general, not subject to fits, bad legs, headaches, dropsiness, or hysterical attacks; that she should be strong, active, not younger than thirty or older than fifty, or fifty-five at the utmost. *Before* thirty she cannot be expected to possess that firmness of character so necessary in a person undertaking such responsibilities as her duties impose, or manifest that prudence and discrimination she is so often called upon to evince; while *after fifty* she will neither have the strength and alacrity of body so requisite in a nurse, nor that tranquillity of mind and equanimity of temper which should form the highest attributes of the truly professional nurse. There are two other physical imperfections the nurse should be free from; viz., she should not be lame or hard of hearing; deafness is, perhaps, one of the greatest drawbacks a nurse could possess. Not alone would such an affliction prevent her hearing the murmurs or faint solicitations of her patient, but, what would be of still more consequence, she might misunderstand the directions given her by the physician, or the purport of the patient's wishes.

The nurse should not be too tall or too short, and, more than all, she should not be fat or too bulky in person. If very tall, her height may become a source of annoyance and even antipathy to the patient, irritating his mind by the omnipresence of her figure; if too short, the nurse will be unable to reach over her patient, and perform many offices with facility and despatch, which a taller frame and longer arms would have enabled her to execute with ease and comfort; and, lastly, if fat, she will be heavy, slow, and in all probability prone to drowsiness and deep sleep.

A nurse should possess that happy medium of stature known as the middle height; be of sufficient strength to lift her patient without risk or exhaustion; of a pleasing, cheerful countenance; quick but careful in her actions, and light and noiseless in her tread; and lastly, as regards her physical requisites, her hands should be soft and pleasant to the feel.

The moral requisites of the nurse, hough not so numerous, are no less imperative than those of her person. Her lisposition should be naturally cheerful; er temper kind, but firm; her self-control enduring, but unshaken; and her atience without reproach, to enable her o bear, with an unruffled temper, the aptiousness of sickness and the irritable xactions of the convalescent; for the urse who forgets the discontent and retfulness that suffering and disease so ften calls forth, and, losing her prudence, nters into contentious strife with her atient, is unfit to be trusted for an hour n the room of the afflicted. The face of he nurse should be a reflection of her mind,—contented and pleasant, and neither gloomy nor repulsive; her voice should be low and gentle, but firm. Besides these qualities, she must be tolerably educated and fully able to read, without hesitation, all the directions accompanying the medicine entrusted to her for the patient. She must also be able to bear fatigue without distress, and be prepared to sacrifice her rest when the watchfulness and pain of the invalid demands her vigilance.

The dress of the nurse, especially in long and severe indispositions, is a matter also of some importance, and should never be of a dark or sombre colour, but of some light and cheerful material, while tidiness and cleanliness in dress and person are indispensable requisites in the female who undertakes the duties of a general or sick nurse. It must not be supposed, because we have been particular in enumerating all the qualities, moral and physical, which a nurse should possess, that we have overlaid the figure with unattainable virtues, or are in any degree fastidious in our estimate of the average qualifications of the class to which we refer: on the contrary, a large experience and a close observation of the subject has impressed on our mind the vast importance of good nursing in the successful treatment of a long or dangerous sickness; and that, in very many cases, after the turning of a certain point in the disease, the final recovery of the patient is far more in the hands of the nurse than dependent on the skill of the physician. The doctor may advise and suggest the general plan of personal attendance, and lay down special dietetic rules for her guidance; but it depends upon the willingness of the nurse to obey his orders, and to her watchfulness, solicitude, tenderness of manner, and equable temper, whether those means and remedies will work beneficially for the patient's bodily and mental recovery. We feel, therefore, confident that not an item of personal qualification set down in the above requisites for a nurse is uncalled for, hypercritical, or could with justice to the patient be dispensed with.

There is hardly any vice or moral obliquity in the character of a nurse that might not be endured with impunity, rather than the self-opinionated captiousness which some inflated nurses assume. The injury such self-conceited women do to the patient, the medical man, and the happiness of a family, is sometimes excessive. They submissively receive all the directions given them by the physician, with voluble promises to follow his instructions; but no sooner has he departed, and they are called upon to execute his orders, than they begin to talk about the experience they have had in *precisely* the same case, and under the *great* Doctor So-and-so, and the *head physician* of such an institution; but "she never knowed it so treated before, and it went agin all her experience to worrct the poor dear patient in sich a way." The patient, attracted by the half-muttered censure of the nurse, and her reluctant performance of her duties, becomes dissatisfied with the treatment pursued, and, as a natural result of the state of his mind, the remedies produce no beneficial effect. The friends, taking the talkative nurse at her own estimate, lose confidence in the physician they have consulted, and request him to call in further advice, resolved never to trust him again with the life of a friend; while the medical man, whose practice is censured because the nurse *thinks* she has seen the same disease differently treated, is injured in credit, if not professionally ruined, by the opinionated arrogance of an ignorant and conceited woman, who, instead of being his humble assistant, becomes his enemy and traducer.

Of late years, and through the noble example of Miss Nightingale, — than whom no one better understands the requisites and benefits of good nursing, —schools have been established where females of a proper age and disposition are duly instructed in all the branches of their responsible duties, and, under a kind of diploma of efficiency, are sent forth to the public as professional nurses. Such a certificate is a recommendation that ought to cancel every word we have said on the matter; but for the thousands who require nurses, beyond the power of obtaining a duly authenticated one, our remarks stand in all their force. In conclusion of this department of the subject, it should never be forgotten that a christian, motherly, cheerful woman in a sick chamber is *more potent for good* than all the skill of medicine or surgery combined.

THE MONTHLY NURSE.—It does not follow that the persons who fill this order of nurses should possess all the qualifications we have set down as necessary in the instance of the former, or sick nurse. As, however, the monthly nurse must, for the time her services are required, live and associate almost exclusively with the patient—the mother—for many hours of every day and night, she having no one else to converse with, it becomes a matter of some importance that the nurse should be a person of *some* information, capable, if required, of reading to the mother, and occasionally of amusing her listener's mind with something better than the idle gossip of households in which she has formerly been engaged, or passing the hours of baby's sleep in the record of morsels of questionable scandal. In the former case, it is immaterial, so long as the nurse is of a feeling disposition, whether she is a married or unmarried woman; but in the case of the monthly nurse, it is a *sine qua non* that she should at least have *been a mother*.

Many of the persons who undertake the duties of a monthly nurse have no further qualifications for the post they apply for than the simple fact of having been themselves mothers, or once or twice joined a group of sympathizers at the childbed of a neighbour. Small tradesmen's wives, and laundresses, tempted by the fee from a respectable establishment, are the usual applicants of this class; another set of candidates, but equally unfitted for the duties, are hospital nurses, and ordinary nurses out of employment, or incapacitated by years or infirmity for duty in a public institution. In the metropolis, and many of our large cities and towns, properly educated or professional nurses are now to be procured, and such persons consequently carry their credentials of competency in their certificate, and all the lady has to do is to look to the applicant's moral character; and as most of the items which make up a desirable personage are carried in the face, manner, and voice of the applicant, there are few mothers of families or young wives who do not possess the judgment and tact to translate them truly. A cheerful countenance, a pleasing voice, cleanliness, activity, and a regard—*real*, not assumed—for children,—these are the characteristics which an intelligent woman may, by the use of her eyes and a little conversation, easily satisfy herself upon. The only drawbacks to the above satisfactory qualities are the inquiries to be made as to sobriety, and whether the otherwise excellent nurse is likely to be infested in her temporary home by frequent bevies of children,—a circumstance which no prudent mother, for her infant's sake, would tolerate.

In the country, where professed nurses

are only to be procured at great expense, the difficulty the mother encounters to obtain a nurse, with moderate qualifications for her duties, is often very great: cleanliness, motherly solicitude for her charge, and willingness to perform all that is expected of her, as respects attention on the mother and infant, will form in general the utmost limit of her capabilities.

If she is given to gossipping with the servants, addicted to afternoon slumbers, and *occasional drops of spirits for the colic which has afflicted her at times for life*, these, and probably a few others, if they cannot be corrected by keeping her exclusively to the sick-room, allowing the afternoon nap when the baby is safe in the cradle or on the mother's lap, and by daily anticipating the *occasional* colic by a glass of wine or a medicinal quantity of spirits,—and if, in fact, these evils cannot be modified, they must be often endured for the sake of attention to the infant, cheerfulness at night time, when the rest is often broken, and by her kindness to the other children whenever admitted to see mamma and the new brother or sister,—a point upon which nurses *can be* very captious and disagreeable, while her consideration and good temper in that respect is always sure to be gratefully received by the mother. As in seven cases out of ten the nurse's duties with the mother expire in a great measure with the first week, and it is for the infant that she is especially engaged, and as nurses are apt to be very exacting in their mode of management, especially with *young* mothers, they are often compelled to submit, against their better judgment, to what they feel to be bad or hurtful.

No lady of delicate nurture can bear o see her infant subjected to the rough ut well-meant manipulations endured y the child of a ploughman; no source f maternal distress being more frequent han that of the daily washing, when, for e best part of an hour, through the nstant protest of cries and shrieks, the fant's tender body is exposed and ritated by the nurse's hard, rough nds, as she needlessly turns it from ck to front, and from side to side, rough a ceaseless jolting of her bony ee.

Much—nearly all—of this distressing ying might be avoided by *tender handg*, care, and sufficient *time* for the erations of washing and dressing, and thus what is made a torment to the infant converted into a pleasure.

If the articles ADVICE TO MOTHERS, INFANT, LABOUR, and a few others in this work are consulted, the young mother will learn how to perform all the duties appertaining to the dressing of the child, so as to be able to practise a more agreeable method when she undertakes those responsibilities herself. It is almost unnecessary to observe that a woman who takes *snuff* should never be allowed to dress an infant: that is a self-evident vice easily guarded against. But what the mother has more reason to dread, because always done in secret, is the practice too often adopted by nurses, to save their rest and calm a mother's fears, *of dosing the infant with some narcotic cordial.* The danger of this practice cannot be too severely reprobated, and it will often tax the mother's utmost penetration to detect how and when it is done. Infants never cry without a cause, and one of the greatest mistakes a nurse commits is to suppose it cries for want of food. THIRST, however, is far more frequently the cause of its complaining than flatulence, want of food, or any other reason; but even if the nurse suspected such to be the case, she would probably shrink with horror from giving the little sufferer the *only remedy* its nature craves—A FEW TEASPOONFULS OF WATER SLIGHTLY WARMED. The fee of a good professional nurse varies, according to the doctor's standing who introduces her, from two to five guineas for the month, and from seven to ten shillings a week for all the time before and after the actual month she remains in the house.

THE WET NURSE.—In selecting a person to take the management of an infant the mother cannot or does not mean to rear, whether from the birth, or some months afterwards, care should be taken that the nurse's infant is as near to the age of the child she is to suckle as possible. In the selection of such a nurse, the medical man generally takes all responsibility, both as respects her physical health and moral character; it is, therefore, unnecessary in this place to enter upon that part of the subject.

The wet nurse should live in the house of her employer, be under the supervision and control of the family doctor, her diet being regulated by what he deems the best suited to her health and constitution. In general, a full diet of animal food, with eggs, puddings, bread, and potatoes, with from two to three pints of half-and-half, stout, or porter a day, is the usual order in which the wet nurse's dietetic scale is allowed. The ordinary wages given to this description of nurse in good families is from seven shillings to fifteen shillings a week.

NUT GALL. See GALL NUTS.

NUTMEG.—This well-known spice is the fruit of the *Myristica moschata*, the same tree that yields the mace, which forms the inner pericarp to the nutmeg, enveloping the nut in a delicate network or covering, of a rich scarlet colour, the whole being protected by a firm fibrous coat, like the husk of the walnut. Nutmeg acts as a stimulant and carminative, and is a most useful condiment both in health and sickness. The active principle of the nutmeg depends upon an essential oil, of which it yields a large quantity, a small amount of which, dissolved in spirits of wine, forms the spirits of nutmeg, occasionally used in medicine in doses of half a drachm. When nutmeg is given in its pure state, with chalk and magnesia, the dose of the grated nut is from 10 to 15 grains.

THE NUTMEG AND MACE.

NUTRITION is that process in the chemistry of animal life by which the foods taken into the stomach are assimilated into solids and fluids of the same nature as those of the system which receives them. Nutrition is that property by which the wear and tear of the body is fully and properly compensated, and a just balance between expenditure and reproduction maintained. Though nutrition is the result of healthy digestion, every function of the body must combine to make the effect of nutrition perfect.

The process of nutrition has two stages, as we have shown under DIGESTION and FOOD. The first consists in converting the aliment into chyme by the stomach, the conversion of chyme into chyle by the bile and duodenum, and the change of the chyle into arterial blood by the lungs; the second, the elaboration from the arterial blood of all the solids and fluids of the system. The system of nutrition, as noticed under NERVES, is that ganglionic chain, tracery, and network of ganglia and plexuses which begins with the great sympathetic and some branches of the fifth pair, and terminates with the last of the lumbar nerves.

NUX VOMICA, OR RAT'S BANE.

NUX VOMICA STRYCHNOS.—The botanical name of the plant which yields the deadly principles of *strychnia* and *brucia*. Nux vomica, or rat's bane, is a native of the East Indies, where the plant has been long used for medicinal purposes, and to cure the bite of reptiles. In this country, however, the bark of the tree is the only portion ever used in medicine; this, under the name of False Angustura, was some years ago used in infusions as a tonic and stomachic, but, from being apt to produce excessive

; if given in any quantity, it soon
disuse. The nut, cut into round
bout the size of a shilling, and of
e brown colour, is the form in
rat's bane, or nux vomica, is sold
shops, where it is only vended as
n-killer. See STRYCHNIA.

S.—From the large proportion of
nd oil which all nuts contain, they
considerable amount of heat-form-
nent, and are consequently so far
us, and, when combined with a
portion of nitrogenous substances,
a good and wholesome food. To
them so, however, they should be
vhen fresh, and before age has
osed their sugar, or rendered their
id. On the Continent nuts are
much greater esteem than with
food, for which, in many parts of
y, they form an important part
oor man's dietary.

TALOPIA.—Day blindness. This,
ht blindness, is a peculiar affection
optic nerve, in consequence of
he person is unable to distinguish
ect clearly by day, or any strong
ut can discern readily enough as
and obscuration advances.

PHA, OR LOTUS.—An aquatic
ative of Egypt and both the
and growing abundantly on the
f the Nile. The root is about the
pear, and, when boiled, becomes
w as the yolk of an egg, and is
a dainty food by the poor, who
t as we do the potato.

PHA LUTÆ.—The yellow water
root having the same esculent
es as that of the lotus, the
and Norwegian peasants eating
vidity in years of scarcity.

PHOMANIA. — A true and
disease, and no more under the
of the will than hysteria or teta-
e unfortunate patient, instead of
garded as a stain on morality,
e commiserated for her physical
ne.

PHOTOMY. — The excision of
phæ, when too large, in the way,
ed.

O

fifteenth letter in the alphabet;
n used as an abbreviation, stands
dical men for *octarius*, a pint or
fluid. As a numeral, it formerly stood for 11, and with a dash over it ($\bar{\text{O}}$), for 11,000; and in modern arithmetic is used for the cipher O.

OAK, THE.—This tree, the *Quercus rubor*, so emblematic of British power and character, has long been used in medicine for the only properties it seems to possess, those of a tonic and an astringent; and though the first use is now entirely surpassed by the more certain qualities of quinine, it stills retains a place, and a prominent one, in the last.

There are three varieties of the oak,—the *Quercus pedunculata, Quercus pubescens*, and the British *Quercus rubor*. The bark of the oak is the only part of the tree used medicinally, and from the fact that in it resides the active principle of the tree, the *tannin*, that astringent property on which the conversion of hides into leather depends. The mode of employing oak bark is either as an infusion, decoction, or as a powder.

As an infusion, as a tonic and stomachic, the dose is an ounce three times a day.

The decoction, either alone, or with alum, kino, or catechu, is used as a gargle for relaxed sore throat, and sometimes as a lotion to ulcers, and loose, flabby granulations.

The powder, when employed as a febrifuge, is given like quinine, in doses of from ½ a drachm to 2 scruples.

OATS.—The *Avena sativa*, or common oat of this country, belongs to the Natural order *Gramineæ*, and is too well known to need description. The oat, as we have shown under Food, contains all the proximate principles of wheat and the nitrogenous or flesh-forming class of vegetables, such as starch, sugar, gum, cellulose, caseine, &c., and is consequently a highly nutritious substance. Though the oat in England, under the name of corn, is only used as a food for horses, it forms in Scotland and Ireland what may be called the staple of the national food.

Oats are seldom reduced to a powder or flour, like wheat, and are generally used in the form of a husked or comminuted grain, under the name of groats and oatmeal, and it is in the latter form that it becomes the food of millions of people, either as a bread or a porridge. When the oats are denuded of their covering, or internal husk, they are called groats or grits, in which form they have long been a popular article for the invalid and convalescent. The same grain so cleaned, when crushed, is called the Emden groats; and when still further bruised, prepared groats, the article so generally sold for sick persons. Oatmeal is the grain after being winnowed from the first husk, kiln-dried, and roughly ground, and is precisely what the prepared groats are, with the exception that, in the latter, no husk is left, while in the oatmeal the husk forms a conspicuous object. This meal the Scotch not only make into porridge (for breakfast, and often for supper,—a dish universally eaten), but the peasantry make a bread and pudding of it, in the form of oatcake, besides using it largely in the dish called Haggis (which see), while with potatoes it is sometimes made into bannocks.

A still further use is made by our provident countrymen in the north of this valuable grain, for of what may be called the very offal of the plant, its condemned chaff, they make a fermented aliment, redundant of nutritive matter, called SOWENS, which in hot weather is a light, pleasant food to all, while to the invalid it forms a repast that acts both as a medicine and an aliment. So highly did the celebrated Dr. Gregory think of this food, that he has handed down to future ages his appreciation of it in the finest modern Latin extant, "The Conspectus." See FOOD, and INVALIDS, FOOD OF.

The only drawback to the constant use of oatmeal as a daily aliment is a fact first made known by medical investigation almost thirty years ago, namely, that many sudden deaths among the peasantry who lived almost exclusively on oatmeal, which were supposed to be cases of *intussusception*, or *enteritis*, or inflammation of the bowels, were discovered to proceed from a mechanical obstruction caused by the formation of a ball—sometimes as large as a cricket-ball, though generally much smaller—firmly lodged in some part of the bowels, where it completely cut off all passage through the canal, producing as a consequence what is known as a stoppage, inflammation, and too frequently death. These balls when examined were found to consist of an immense aggregation of the husk or chaff of oatmeal, formed, like the calculi in the bladder, of a *nucleus*, round which concentric layers had accumulated, till the mass, moving from some bend or elbow in the bowels, where it had unnoticedly developed, suddenly dropped into the tube, and there blocking up all access, led to the consequences referred to. As a general rule, however, it is on the presence of the chaff in the oatmeal that the health of the person who uses it so much depends, for the sharp spiculæ or points act as a mechanical stimulant on the coats of the bowels, and keep them active without medicine. It is on this very principle that brown or coarse bread is beneficial to the dyspeptic and costive patient.

OBESITY.—Fatness, or excess of the adipose tissue. All persons as they advance in life become fat, either generally or in part; some show it externally in the fulness and roundness of their limbs and body, and the general expansion of their frames; others remain externally the same spare, attenuated persons in advanced life they were in youth, though the fatty deposit may have taken place internally. Obesity sometimes amounts to a disease, by rendering the person unwieldy, and his organs incapable of performing their proper functions. For the treatment of such cases the reader is referred to the article FOOD, where he will find a list of those aliments which generate fat, and those which produce muscle; he will then only have to decide upon which class of substances he will henceforth live, to cause the re-absorption of his fat and the development of muscle.

OBLIQUUS, OR OBLIQUE.—The name given by anatomists to several sets of muscles whose function is to perform a sideways or oblique action: thus we have the internal and external oblique muscles of the eye, the latter sometimes called the pathetic or *trochleares*, from the use ladies make of them to ogle; next, the external and internal abdominal oblique muscles, serving partly to turn round the trunk; and finally, a set of oblique muscles of the neck, moving the head round.

OBSTETRIC, from *Obstetrix*, a midwife. Obstetric surgery—the practice of midwifery.

OBSTIPATION.—A confined state of the bowels.

OBSTRUENTS.—Another word for astringents, or such medicines as draw together and close the mouths of bleeding vessels: such as kino, alum, or other styptics.

OBTURATOR, OR ROTATOR.—Muscles which roll a limb outwards or inwards, such as the obturator externus and internus of the thigh.

OCCIPUT.—The back part of the head, the *occipital bone* being the opposite of the frontal—*sinciput*, as it is sometimes called,—or forehead. A muscle, thin, broad, and fibrous, extending from the base of the occipital bone to the ridge of the eyebrows, and called, from the place of its origin and insertion, the *occipito frontalis.* This muscle corrugates the brows, and moves the scalp.

OCCLUSIO.—A term used by oculists to express different degrees of obstruction of vision caused by different kinds of membranes.

OCCULT.—This is a term only used in a pathological sense, when the origin of a disease is lost or undiscoverable.

OCULAR SPECTRA.—False impressions produced on the eye in persons of a highly nervous temperament, or those labouring under cerebral excitement; and though the ear, nose, the palate, or the skin, are all liable, according to their several senses, to these false impressions, the eye is by far most seriously and frequently affected by these illusions, which may vary in their character from mere moats seeming to pass before the sight to the semblance of a corporeal apparition or spectral illusions. Ocular spectra can only exist in a diseased state, and are usually regarded as a symptom of brain or nervous disease. We shall refer to this subject under another head. See Muscæ Volantes.

OCULUS.—The Eye, which see.

ODENTAGRA.—Gout in the teeth or gums.

ODENTALGICS.—Remedies for any affection of the teeth.

ODOUR.—The smell, perfume, or exhalation given off by any body, animal or vegetable. An odour may be either aromatic or fœtid, sweet or pungent, or it may be exhilarating or oppressive.

All odours affect the brain through the olfactory nerves, on which the particles of odour act mechanically, like stimulating atoms, piercing with their sharp points the delicate expansions of the schneiderian membrane, on which the nerves are diffused. The nervous system of some persons is so highly organized, that odours the most exquisite to others cannot be tolerated in their faintest breath, or else induce headaches, sickness, vertigo, and fainting. When these effects are produced they are caused by the branches of the fifth pair of nerves acting through their union with the great sympathetic chain.

ŒDEMA.—A tumour or swelling, but, more strictly speaking, a diffused, puffy distension of a part or limb, white, soft, and insensible, proceeding from an effusion of water, as in the case of dropsy. Œdema of a limb or membrane may occur from debility as well as from disease in the organ, from a simple loss of power in the circulation, or from pressure on some important vessel. Œdema is generally characterized by a white, shining appearance of the distended cuticle, loss of heat in the part, the absence of pain, and by the swelling *pitting* when pressed with the finger.

Œdema, when the result of weakness or inaction, should be treated by tonics, blue pill, and repeated friction; such remedies as 2 grains of quinine twice a day, a 4-grain blue pill at bedtime, and camphorated oil rubbed into the part for half an hour three times a day.

ŒSOPHAGUS.—The gullet, a long muscular tube, the continuation of the pharynx, or back of the mouth, and descending with a slight curve to terminate on the left side of the stomach, at the cardiac opening of that organ. See Gullet.

ŒSOPHAGOTOMY.—The surgical operation of cutting into the œsophagus to remove any foreign body, which, too large to pass farther, or arrested by a spasm of the muscles of the gullet in the passage, causes the mass to press on the windpipe before it, and thereby endanger the person's life. The substances that most frequently lodge in the gullet, and require the operation of œsophagotomy, are new potatoes, pieces of meat, or lumps of apple, all of them unmasticated, and most frequently swallowed with gluttonous haste.

OFFICINAL.—A pharmaceutical term, implying "of the shop or laboratory." It is customary to call every article appertaining to the Pharmacopœia *officinal.*

OIL.—There are two kinds of oils, the animal and the vegetable; divided into two orders, the fixed, and the essential or volatile. The principal characteristics of all oils are, that they are lighter than water, are of an unctuous feel, leave a stain on paper, burn with a broad flame and much smoke, are inadmissible with water, and with an alkali form soap.

The chemical composition of all oils, butter, fat, or grease, is nearly the same, and consists of three elementary principles in the following proportions:—

Carbon	11 parts or atoms.
Hydrogen . . .	10 „ „
Oxygen . . .	1 „ „

We have shown, under heat-forming foods, of which fats and oils form an important part, that by the addition of *one* atom of carbon and *nine* atoms of oxygen to the above proportions, the result would be *starch* or *sugar*, water converting the one into the other. All oils, fats, and grease contain two principles, one solid, the other fluid—*oleine* and *stearine*. Fat or oil, as an article of heat-generating food, is 2½ times more combustible than starch, which may be taken as the type of this class of foods—combustible as regards its consumption by the lungs. In other words, 1 pound of butter is equal to 2½ pounds of sugar or starch. The principal of the ordinary fluid oils, or, as they are sometimes called *fixed* oils, are the almond, olive, castor, croton, and linseed. The chief of the *essential* or *volatile* oils are cinnamon, cloves, mace, cajeput, aniseed, caraway, cubebs, peppermint, spearmint, pennyroyal, rosemary, orange, lemon, thyme, juniper, amber, pimento, and others. Turpentine is regarded by some as an oil. Palm oil, spermaceti, cod-liver, suet, lard, and blubber or train oil, may be called, by way of special distinction, the fixed animal oils, heat being only necessary to render all of them fluid.

OINTMENT, OR UNGUENTUM.—A medical preparation in which different drugs are united with lard or oil to form a cerate of different consistencies. The ointments in most frequent use are the simple ointments or cerates made of oil, lard, spermaceti, and white wax; basilicon, or resinous ointment, made with lard, yellow wax, and rosin; mercurial ointment; and what is called citron, or ointment of the nitrate of mercury. Ointments or cerates are used for dressing sores, and protecting them from the air, though the benefit they afford is often very questionable. The employment of ointments is rapidly going out of fashion, and lotions taking their place, in the treatment of sores—a much more judicious and cleanly mode of treatment, for the grease of which ointments are made, from being long kept, is often rancid when applied; or if not, the heat of the part soon makes it so, when it becomes a source of irritation, undoing all the benefit anticipated.

OLECRANON.—The projecting process of the *ulna*, the sharp, uncovered projection at the elbow, over which the ulnar nerve passing, and only protected by the cuticle, exposes it to the numbing sensation experienced in the hand and forearm when the part is accidentally bruised or hit.

OLEFIANT GAS.—A gas well known *to chemists* as the carburetted hydrogen, its constituents being,—carbon, 1 part; hydrogen, 1 part.

OLEUM.—Oil. See OILS.

OLFACTORY.—The name given by anatomists to the first pair of nerves, the nerves of smell, distributed on the schneiderian membrane of the nose. See NERVES.

OLIBANUM.—The name of a medicinal gum-resin obtained from a fragrant plant, native of Africa and the Eastern Isles, and formerly much used as a stimulant and emmenagogue, but now almost forgotten in the practice of medicine.

OLIVARIA CORPORÆ.—The name given to two small, olive-shaped eminences at the base of the brain, at the commencement of the *medulla oblongata*, or spinal marrow.

OLIVES.—The plant which yields the well-known fruit of olives, though a native of the East, has long been extensively cultivated along the whole northern shore of the Mediterranean, particularly in Italy, where immense quantities of this fruit are annually cultivated, and the oil is exported in such great quantities from one particular town as to obtain for it the name of Florence oil.

The olive plant may be propagated by seeds, cuttings, layers, or saplings, and usually takes from three to four years to cultivate before bearing fruit. The Greeks are in the habit of eating great quantities of the fresh ripe olives as a part of their daily aliment; though in general, on account of the bitterness of the rind, they are only partaken of as a delicacy when pickled, the brine in which they are prepared developing the full and agreeable flavour so highly appreciated in this fruit when so prepared. Olive oil is obtained in various ways from the ripe fruit, either by pressure or by warm water; and though that exported from Florence is regarded as the best, it is by no means equal to the oil as prepared in the south of France, that procured from Aix in Provence being much superior in purity, and having also the advantage of keeping much longer than any other kind, without becoming rancid. Olive oil should be perfectly limpid, clear, of a pale straw or yellow colour, and of a bland, nutty, pleasant taste.

MEDICAL USES AND PROPERTIES.—Olive oil acts on the system, when taken internally, as a demulcent and an aperient; and when employed externally, as an emollient and sedative. As a demulcent, it is customary to mix it with the yolk of or combine it by trituration in a with gum or mucilage, and then or three tablespoonfuls of the for a dose. When employed as e, the dose is from three to four nsfuls, or from an ounce to an nd a half. Under the names of lorence, or sweet oil, the oil of largely used in medicine, as the nearly all of the embrocations or s employed for sprains, muscular r rheumatisms—equal parts of and spirits of hartshorn constihe popular liniment known as n and oil.

physicians have great faith in the on of olive oil to irritable ulcers, d stings of venomous reptiles, that, in addition to their soothdative property, they exercise a

THE OLIVE.

ly beneficial effect. As a Food, already, under that head, shown way this and all other oils act on m: and as affording fuel to the ll oils become articles of the consequence to the body. On unt, from affording carbon to the ive oil, when taken in quantity, greatest service to those whose n requires a large amount of heat, or those whose exertions rgely on the lungs, or those, again, accustomed to carry heavy weights. Some of the Continental porters are in the habit of drinking half a pint of olive oil daily, and find—without knowing the cause—that such unctuous libations are necessary to the healthy maintenance of their bodily strength. It is partly on this principle that oils, suets, and fats are prescribed in consumption, the only difference between olive and cod-liver oil being that the latter contains a little nitrogen and some amount of iodine. As a condiment, or rather provocative to food or wine, olives are first submitted to a lye of lime or alkali, to neutralize the bitter in the rind; they are then washed in cold water, digested some time in fennel and water, or some aromatic plant, and finally bottled in a strong brine till they are considered fit for after-dinner service; when, for strong and healthy digestions, they may be freely partaken of, but not by the invalid, or one whose stomach is at all debilitated. See FOOD, HEAT-GENERATING.

Olive oil is purified by shaking a quantity of it in water for some time, and then, when the oil has separated, pouring it off from the water.

OMAGRA.—A name used by former physicians for gout (see PODAGRA), especially for an attack of gout in the shoulder.

OMENTUM.—The caul, or a double membrane spread over the bowels and the abdominal viscera or organs.

By some anatomists this important membrane receives the name of *epiploon*, a Greek compound word signifying the covering of the entrails, the name *omentum* being derived from the custom the soothsayers had of always examining this membrane, and from its position, or character, deducing their sacrificial omens. Anatomically, the omentum consists of adipose tissue and folds of the lining membrane or *peritoneum*, and besides guarding the organs of the abdomen from cold or external injuries, is the great reservoir of fat in all the lower animals, constituting what is commonly called tallow. In man, after forty years of age, there is always a large accumulation of adipose or fatty matter in this membrane, giving that prominence to the part generally called obesity. See CAUL.

OMPHALOCELE.—A surgical term derived from the Greek, signifying a rupture at the navel, or *umbilicus;* an accident to which females are more subject than males, and which sometimes occurs during labour from the severity of the pains. See Rupture.

ONANISM. — See Reproduction, Organs of, and Injury to.

ONION.—The onion family is one of the most useful set of articles in the vegetable kingdom, and is used in the dietary of man not only on account of its highly nutritious properties as a food when properly prepared, but because its stimulating character renders it one of the most valuable condiments in the whole range of culinary articles. Botanically, the onion or *allium* belongs to the Natural order *Asphodeleæ*, and embraces four varieties,—the common onion (the *allium cepa*); the leek (*allium porrum*); the garlic (*allium sativum*); and the shalot (*allium asalenicum*). Of the common onion there are many varieties, from the small white onion used for pickling to the monster bulb, the Spanish onion; and from the Canadian tree-onion—which grows its bulb on the top, instead of the root of the plant—to the potato onion, in which the tubers are propagated like a potato, and when the haulm is pulled or dug up, as in that useful vegetable, from ten to twenty onions are found clinging to its rootlets. In this country, the common onion, in all its sizes, from the small round to the large flat Yorkshire and Spanish bulb, is the variety of the family universally employed. In Spain, Portugal, Italy, and France, the garlic is the species always used. In Switzerland, Wales, and Scotland, the leek is the variety selected. Of the leek there are also several varieties, but differing less in strength than in size and the amount of mucilaginous matter they contain.

Medical Properties and Uses.—The active principle of the onion (the whole family) depends upon its strong, pungent essential oil; the onion containing the largest proportion, the garlic next, the shalot still less, and the leek least of all. It is to the stimulating properties of this essential oil that garlic to the Spanish or Italian peasant becomes an article of such actual necessity to his health and strength, for in general, a clove or two is the only relish he possesses to his dry and monotonous fare of maize or rye bread, ewe cheese, and the other unsavoury items which from year to year make up his dietetic scale. Garlic gives a zest to his unpalatable food, promotes digestion, and by its medicinal effects becomes an absolute requisite to his daily food.

The onion acts on the system as an expectorant, stimulant, diuretic, and diaphoretic. Though these several properties are well known to medical men, there is only one preparation of the onion family to be found in the Pharmacopœia, and even that is now hardly ever used, viz., the ointment (*unguentum allii*), used as a dressing to indolent ulcers, or wounds which have fallen into an apathetic state. The Jews and Arabians, who use garlic as an article of food to excess, were also in the habit of employing it in medicine in such diseases as dropsies, asthmas, and agues, for which purposes it might still be employed with signal advantage.

Boiled onions, with butter, pepper, and salt, not only make a good supper, but a useful expectorant remedy in cases of obstinate catarrh or oppressive breathing, while, by their action on the bladder, they materially assist in carrying off any accumulation of water from the system. In any form in which onions or garlic can be taken, they are certain to act as an expectorant, partially as a diaphoretic, and actively as a diuretic.

As a stimulant and counter-irritant, an onion cut in two, and its cut sides rubbed for a few minutes on the skin over the affected part, is often, by the irritation it produces, highly beneficial. It is also useful in chronic swellings, indolent tumours, and other torpid enlargements, while in cases of asthma, if employed in the same manner over the chest, its effect is often highly gratifying. In cases of deafness from accumulation of wax in the ear, a popular and successful remedy is obtained by rolling a clove of garlic in mustard, enclosing it in a fold of muslin, and inserting the whole in the ear, a hot poultice being then placed over the ear, and retained for some hours. The juice of garlic is said to be the strongest cement for glass that can be used.

ONYCHIA.—A painful abscess near the nail. See Whitlow.

ONYNX.—A small collection of matter. A minute abscess, formed between the cornea of the eye and the aqueous humour, and so named from being of the colour and diminished shape of a man's nail.

OPACITY.—This term is chiefly applied to the organ of vision, and is caused by whatever renders opaque, dark, or milky, the transparent window of the eye—the cornea. Of these opacities there are many varieties, but all of them require the attention of the surgeon or the oculist. See Eye.

ERATION.—Any surgical assist-
endered to a patient by means of
nents is so called, whether per-
by cutting or by blunt implements.
operations are such as do not in-
isk or danger to the person operated
such as cupping, bleeding, tooth-
g, opening the temporal artery or
vein, tapping, and the application
a. Capital operations are those
can never be performed without
ng a certain amount of risk to
tient; of these are amputations,
ny, the operation for incarcerated
removal of deep-seated tumours in
k, and several others.

THALMIA. — Inflammation of
, or, more properly speaking, an
nd very severe inflammation of the
tiva or external coat of the
nerally attended with such violent
that, unless early and vigorously
, it has a great tendency to termi-
the entire loss of vision in the eye
.

icians have divided this formidable
into eight or ten distinct varieties,
named from the part more par-
y diseased, or from the character
discharge which accompanies the
d symptoms. These, however, may
included under the three heads,
lmia, *Purulent Ophthalmia*, and
hœal Ophthalmia.

lent ophthalmia is that form of
ation of the eye known as con-
ophthalmy, or the Egyptian variety
isease; and the latter a disease in
ay resembling the purulent, only
by a specific virus, as indicated
ame

HALMIA, MUCO-PURULENT. —
ms.—These begin with a dry,
heat in one or both of the eyes,
g the sensation, frequently, of
ing collected between the ball of
and the lids. These symptoms
nded with pain in the head; the
soon after commence swelling;
e coat, or conjunctiva, of the eye
bloodshot, with here and there a
oured spot; the upper eyelid also
swollen, and so elongated that it
the lower lid. A thin discharge
takes place, which, after some
changed into a sticky, mucous
n, followed by a profuse flow of
he vision is frequently obscured
collecting on the cornea. The
nce of light is from the first
unbearable, causing severe pain through the temples, and imparting a dry, swollen sensation to the ball of the eye; all the symptoms becoming more aggravated as evening and night advances, the swelling of the lids, by pressing on the ball of the eye, adding greatly to the pain endured during the disease. The mucous discharge, after a certain time, becomes thicker, and at length mixed with pus or matter, producing the symptom which gives name to this form of the disease—the muco-purulent. The pulse, in consequence of the general disturbance, is quick and full, and sometimes hard and sharp, while the constitutional disturbance, from the pain endured, is often considerable, leading to loss of sleep, fever, thirst, and restlessness. From the severity of the inflammation, the delicacy of the organ, and the importance of the function, the most prompt and energetic measures are necessary in the management of ophthalmia.

Treatment.—Perfect quietude, a low, abstemious diet, and a dark room are the first imperative steps to be adopted. If the patient is young and robust, he should be bled to faintness, by making him stand while performing the operation, and bleeding from a large opening. Cloths, or folds of lint, wetted with warm water, should be constantly applied to the affected eye, or both eyes, and one of the following powders given every four hours till the bowels have been well acted on, and the febrile symptoms of heat and thirst are abated. Take of—

Jalap powder	45 grains.
Cream of tartar . . .	40 grains.
Calomel	15 grains.
Scammony powder . .	18 grains.

Mix thoroughly, and divide into three powders.

Take of—

Powdered nitre . . .	1 scruple.
Tartar emetic . . .	3 grains.
Mint water	6 ounces.

Mix: two tablespoonfuls immediately, and repeated every two hours, till nausea, or a subsidence of the febrile symptoms, takes place. If there is much restlessness and deprivation of sleep, a sedative of either 25 drops of laudanum, 1 grain of solid opium, or the fourth part of a grain of acetate of morphia, should be given at bedtime, so as to insure, if possible, a night's sleep, or, at least, a few hours of ease from pain. The warm bath, about two or three hours after the commencement of the treatment, is often of great benefit, especially if it follows the bleeding.

called Dover's Powder, made by mixing intimately in a mortar 1 drachm of powdered opium, 1 drachm of ipecacuanha powder, and 1 ounce, or 8 drachms, of sulphate of potass. There is, consequently, one part of opium in every ten parts of the mixture; in other words, 10 grains of Dover's powder—the ordinary dose of this preparation—contains *one* grain of opium. The next article is the compound chalk powder (*pulvis cretæ compositus et opio*), made by mixing chalk, cinnamon, tormentil root, long pepper, and gum arabic, all in powder, with powdered opium, in such proportion that 25 grains of the compound powder contains about *one* grain of opium. The dose is generally from 1 scruple to half a drachm. And, lastly, the compound kino powder, the *pulvis kino compositus*, which is composed of kino, cinnamon, and opium, each in powder, minutely blended together, the opium being in the proportion of *one* in *twenty;* 1 scruple, or 20 grains, containing 1 grain of opium: the full dose is consequently *one* scruple. Powdered opium is sometimes used in the form of an ointment (*unguentum opii*), as a dressing to open cancers or irritable sores, and is an ingredient in the compound gall ointment (*unguentum gallæ et opio*), used as a sedative astringent in cases of bleeding or painful piles. The remaining preparations in which powdered opium enters are the electuary (*confectio opii*), made with long pepper, ginger, caraway seeds, gum tragacanth, and opium, all powdered, and then thoroughly incorporated with syrup into the consistency of honey. The dose of this preparation is from 1 scruple to half a drachm. The last formula is the plaster of opium (*emplastrum opii*), a kind of pitch plaster with opium, used for lumbago, but of very doubtful efficacy.

The discovery of the active principle of opium (morphia) has thrown many of the preparations of opium out of general use, the morphia having the advantage of acting as a pure sedative, a great *desideratum* in many cases of fever. Morphia is obtained by dissolving opium in hot water, and treating the mixture with magnesia, which unites with the meconic acid in the opium, forming a meconite of magnesia, while the liberated morphia is precipitated; the precipitate is then treated with hot alcohol, which dissolves the morphia, leaving all the impurities; the spirit is then filtered, and, as it cools, the morphia is precipitated in the form of crystals: the same process is repeated two or three times with fresh alcohol, till the pure white crystals of morphia are obtained.

Morphia is inflammable, and unites with all the mineral and vegetable acids, forming salts known as the muriate, sulphate, acetate, and citrate of morphia, with several others; the above, however, are those in general use, the dose being nearly alike in each preparation, from one-sixth to one-fourth of a grain.

Narcotine, the other active agent of opium, is obtained by mixing the residue left after filtering the hot alcohol in the first stage of the process for morphia with sulphuric ether, and then evaporating the ether, the crystals forming round the vessel, narcotine contains all the irritating and narcotic properties of the opium; this preparation is, however, never used in medicine.

A preparation of opium, greatly in vogue some years ago, and still occasionally employed, called Batty's Sedative Solution, is a kind of acetate of opium, or at all events greatly resembles such a preparation, being a pure sedative, and certain not to produce any stimulating effects. The once celebrated article known as the Black Drop was a strong solution of the acetate of opium. The dose of Batty's solution is from 20 to 30 drops, and of the liquid acetate of opium, the same.

Medical Properties.—No medicine in the Pharmacopœia has so large a range of action as opium, and there is no drug that the physician could less easily spare; and, since the practice of bleeding has justly fallen into disuse, one that has become doubly necessary to his successful treatment of inflammatory fevers. Opium alone acts as a narcotic and stimulant, as a sedative, anodyne, antispasmodic, carminative, and a soporific; while in combination it acts on the skin and kidneys as a diaphoretic and diuretic, besides lowering the action of the heart, reducing the circulation, and checking inflammatory tendencies in the blood locally and generally. The articles with which opium is most frequently and beneficially combined are *ipecacuanha, tartar emetic,* and *calomel;* in all cases it is the peculiar property of this drug to throw the system into a state of singular tranquillity, or a condition favourable to the absorption and consequent operation of some other agent, either given with it or subsequent to the dose of opium, thereby insuring an action which otherwise might not have taken place. The only other means by which a similar result could be obtained, and then ot to the same effect, even if it *could* be nployed in all cases, is bleeding.

In small doses, of a third of a grain of the um, or 10 drops of the tincture (laudanum), pium operates as a stimulant, quickeng the pulse, increasing the heat of the kin, giving increased freedom to the spiration, raising the spirits, and proucing a happy and joyous state of the ind,—in fact, all those happy sensations vividly described in the "Confessions an Opium Eater." Such feelings, owever, are evanescent, and cannot be equently excited without ultimate injury mind and body. When given as a edative or anodyne, the dose should lways be in proportion to the need, so s to avoid the necessity of a repetition, n which case the sedative effect will only e obtained after the stimulating stage as passed off.

When a perspiration is desired, or a iaphoretic action, to relieve the lungs or ronchial vessels, the opium ought to be ombined, as in the Dover's powder, with pecacuanha; and when, in obstruction f the liver, or in dropsies, to carry off he accumulated water, it should be mixed with calomel or squills and ipecauanha; and when, as in rheumatic fever, nd some other types of inflammation, o avoid bleeding, and at one and the ame time lower the pulse, check the irculation, and subdue the pain, it must e combined with nitre, tartar emetic, nd camphor water, as in the following ormula,—not, however, to be commenced till the bowels have been affected by an ctive cathartic. Take of—

Camphor water . . .	8 ounces.
Powdered nitre . . .	1½ drachms.
Tartar emetic . . .	3 grains.

Dissolve, and add—

Laudanum	2 drachms.

Mix: three tablespoonfuls to be given directly, and one tablespoonful every hour till the heat is reduced, and the skin becomes soft and moist.

From its action on the head, the operation of opium must always be carefully watched, and when it induces headache or fulness, and a sense of noise in the ears, it must be suspended: in all cases the bowels should be previously acted on. Though opium is certainly the most useful and beneficial drug we possess, it may become by abuse—as with the Chinese—one of the greatest curses of existence.

As a general rule, opium should *never be given to children* or young people, unless under the watchful eye of a medical man.

For its antidotes, and the treatment in over doses, see POISONS.

OPOBALSAM. See BALM OF GILEAD.

OPODELDOC.—A stimulating embrocation, particularly serviceable in sprains, rheumatisms, and muscular pains. The opodeldoc of the Pharmacopœia is the compound soap tincture, and made with soft soap, oils of thyme and rosemary, proof spirits, and ammonia. There are several kinds of opodeldoc in use, particularly a patented article called Steer's Opodeldoc, in which the article is sold in the form of a soft paste or jellified soap. The tincture of soap, however, as given above, is equal to the best.

OPOPANAX.—The name of a medicinal gum-resin, extracted from the well-known umbelliferous plant, the All-heal. The gum was formerly much used as an expectorant, but has long been quite out of fashion.

OPPONENS POLLICIS.—The closer up or *ad*-ductor of the thumb; a short muscle which, taking its origin from the wrist, is inserted into the bones of the thumb, drawing that member forward on the palm of the hand.

OPTICAL DELUSIONS. See OCULAR SPECTRA.

OPTIC NERVES.—The nerves of vision, or the second pair of cerebral nerves, each optic nerve terminating in the *retina*, or camera of the eye, the disc at the back of the ball on which all objects are reflected.

ORANGE (*Aurantium*).—This well-known and delicious fruit belongs to the same family as the lemon, lime, citron, and shaddock, and, though a native of Northern Africa, is largely cultivated in all the West India Islands, and along the northern shores of the Mediterranean.

Till within the last fifteen years it was customary, on account of the length of the voyage (our chief supply coming from the American Islands), to export the fruit almost green, that it might ripen on the passage: now, however, by the facilities afforded by steam, the fruit is allowed to mature before being exported; and such quantities of oranges, and of a superior quality, are now brought home, that this valuable fruit is as common and cheap with us as our own excellent apples. In a sanitary point of view this is an immense gain to the public, especially to the lower orders, the very poorest being now able to avail themselves of the corrective properties of this fruit.

The medical virtues of the orange (the

citrus aurantium) reside in the citric acid contained in the juice, and the aromatic bitter of the rind, the only part of the fruit used in medicine; for though a large quantity of essential oil is obtained from the fresh rind, it is only used as a perfume. Independent of the service a ripe orange is at all times as a corrective to the invalid, it often becomes an article of great importance as a refreshing diluent and grateful acid: in such cases, however, it should only be sucked, or the juice expressed from the fruit and mixed with a little barley water, and so taken as a beverage. See DRINKS.

The orange peel (*cortex aurantii*) is carefully dried, and then used medicinally in the composition of the compound bark and gentian tinctures, and also to form a bitter aromatic tincture by itself (*tinctura aurantii*), sometimes given as an aromatic bitter—the only object for which it is employed in practice—in doses of 1 or 2 drachms. The orange peel is chiefly used, in infusion with quassia or gentian, as a stomachic, with or without soda or potass, and to form, when boiled with sugar and water, a very agreeable capillaire,—the syrup of orange (*syrupus aurantii*), generally used to sweeten and flavour mixtures. The following prescription will be found a useful form for the employment of orange peel as a stomachic bitter for indigestion or impaired appetite. Take of—

Orange peel (dried) .	2 drachms.
Canella alba	1 drachm.
Calumba	½ drachm.
Carbonate of potass .	2 drachms.
Boiling water . . .	8 ounces.

Infuse for four hours, strain, and take two tablespoonfuls before each meal.

ORBICULAR.—Globe-shaped, round; a term frequently used by anatomists to explain the shape of certain bones, muscles, or the disposition of membranes. The principal application of the word, however, is confined to the two orbicular muscles of the mouth and eye; the first called the *orbicularis oris*, and the second *orbicularis palpebrarum*, or the orbicular muscle of the eyebrow.

ORCHIS MASCULA. — The male orchis, from the root of which plant is obtained the aromatic substance from which the dietetic beverage known as salep is obtained. See SALEP.

ORGAN.—Any part of the body which performs a special operation or function, as the lungs, heart, the stomach, and liver,—performing the offices of respiration, circulation, digestion, and secretion of bile. There are many other organs, all important in their way, either directly or indirectly assisting in the great scheme of life, some performing special duties, others only assisting as links in subordinate chains of action: each, however, under its proper name, will be found described in its proper place, such as the Lymphatic, Salivary, and many others, which see.

ORGANIC DISEASE.—Any structural affection of an organ, such as enlargement, ulceration, thickening, or any other injury permanent or likely to interfere seriously with the function of the organ. See HYPERTROPHY, OSSIFICATION, &c.

ORIGANUM.—The botanical name of the family of plants of which the thyme is the type.

ORIGIN.—The name given by anatomists to the commencement of a muscle, as the *insertion* is its terminal extremity.

ORRIS ROOT.—The root of the *iris* the French emblematic flower, the *fleur-de-luce.* This fragrant, aromatic, and slightly bitter root is imported into this country, and, indeed, sent to all Europe, from Leghorn, in Italy, where this variety of the lily is largely cultivated for the sake of its much-prized root, which, though never used in medicine as a remedial agent, is extensively employed as an adjunct to give perfume and flavour to some external applications. Orris root, denuded of its bark, cleaned, and dried, is sold in the shops to be chewed as a corrective to an offensive breath; but the person who, instead of taking a little aperient medicine, or a draught of wormwood, or infusion of orange peel and potass, would try to cover an intolerable offence by means of orris root, will fully deserve the censure that its detection is certain to bring, for of all the social offences a man can commit on good manners, that of carrying about with him an offensive breath is certainly the greatest. The dried orris root, when ground, yields a powder almost white, and possessing a sweet violet odour, which, when mixed in the proportion of one part, or ounce, to three parts of starch powder, makes the article so frequently recommended in this work for dusting children, dressing blisters, and other purposes, known as VIOLET POWDER. Among perfumers, orris root, in powder, enters largely into their toilet preparations.

OS.—The Latin for a bone; hence

ossification, becoming bone; *osteology*, the science of bones, or the history of the human Skeleton, which see.

OS.—The Latin for the mouth.

OSCHEOCELE.—An obsolete term for a scrotal hernia. See RUPTURE.

OSSIFICATION.—A term used by physicians and physiologists to explain a certain change that takes place in the human subject, generally after middle life, most frequently in advanced life, and sometimes in early age. This change is the gradual laying down of *earthy* particles, such as the phosphate and carbonate of lime, or, in other words, thin bony layers, in structures where no osseous or bony matter should exist. We have, under Bone, and several other heads, propounded this fact, that what we denominate the solid frame of the body, or skeleton, is, in infancy, instead of bone, mere gristle; that as the child grows, this gristle is changed into bone, firm and solid, made strong and resistant by a due admixture of gristle or cartilage; but as life *advances* and progresses into old age, instead of an equal portion of cartilage being laid down, there is not only less, but at the same time a larger quantity always being absorbed and carried away, till at length the bones, deprived of nearly all their gristle, become entirely earthy, a fact which accounts for the ease with which the bones of old people are broken by trivial accidents. It is this disposition of the system after the age of fifty years —in other words, its proneness to deposit earthy particles, in certain constitutions, —which explains that singularity in disease we so often meet with affecting an organ, which we call *ossification.* Why the eliminating arteries should, after a certain age, mistake their duty, and deposit bony fibre where they should have laid down muscular or cellular tissue, or open parenchyma, is a point that no theory has yet made clear, no hypothesis thrown the glimmer of light upon. The fact is all we can deal with, and from that we learn, by experience, that there are certain parts of the body where this irregular and unnatural action is generally developed. The parts most liable to this bony deposit are the heart generally, particularly about the valves; those doors which, every moment spasmodically closing, prevent the regurgitation of the blood either back to the veins, the lungs, or from one cavity to another; next the arteries, especially the great one, the aorta. Ossification may and does occur in other places, but these are the most important and frequently affected.

Many persons have heard of ossification of the aorta, or of the heart, and though comprehending, from what they hear, that it is a very serious disease, are unable to understand the true reason *why* it is so; for the common idea of a part composed of soft and ductile fibre being converted into bone gives rather an impression of strength and solidity than weakness or disease. If a person who wishes to have a clear idea of an ossification will consider that the aorta—the great arterial main of the body—is only about *three* times as thick as a sausage skin, and that in one particular part of its delicate but tough membrane, and often the very spot where the greatest strain is put upon it, the *absorbent* vessels gradually absorb, or take up, layer by layer, the three coats which form the tube, say for the space of half-a-crown in circumference, the *arteries* at the same time filling up every atom of the space with a single film of bony matter, little thicker, often, than an egg-shell, it will then require little information on our part to give them a vivid idea of the consequences of a violent emotion, a sudden jar, a fall, or how an attempt to lift an unexpected weight may cause the surging blood in an instant to press on the fragile shell of bone, which, breaking, allows the stream of blood to pour out, not through the mouth, but deluging heart, lungs, and thorax with the very tide of life.

The SYMPTOMS of this formidable organic disease are so complicated, and often so various, and the treatment, when the disease *is* detected, so contrary and indefinite, that we shall not attempt to give the one or the other, contenting ourselves with this generalization,—that as respects treatment, the following means, persisted in for a length of time, appear to offer the only chance of recovery:—viz., an almost constant recumbent posture, a low diet, perfect quietude, occasional bleedings, and the constant use of tartar emetic. Why we have abstained from either giving the symptoms or a mode of treatment in the diseases coming under this head has arisen from the conviction that no form of ossification can be treated by any one but a medical man of the first eminence. Another motive which deters us is this,—that many nervous persons might, from the similarity of symptoms, persuade themselves into a belief that they had an ossification, and thus make miserable the life of those who only required exercise and tonics to be cheerful and happy.

OSTREA.—Burnt oyster shells; another name for crab's claws, or crab's eyes; a prepared chalk.

OTALGIA OTTIS.—A name given by surgeons to a severe pain in the ear, the consequence of a certain degree of inflammation. See Ear.

OTTO or ATTAR OF ROSES.—This exquisite but expensive perfume is an oil extracted by distillation from the petals of the small white Persian rose. The mode of preparing this dainty scent was long kept a profound secret, especially from Europeans; when once known, however, the wasteful and extravagant system previously adopted soon gave way before the light of improvement and the stimulus of gain. The former mode of procedure consisted in filling a series of large earthen jars, such as olives are packed in, with rose leaves, then pouring spring water into each, till the roses were merely covered, and standing the jars in the sun for three, four, or six days, but removing them under cover each night. According to the heat of the sun, at the end of four or six days, small globules of a yellowish oil were observed floating on the surface of the water; this was the attar, which after a time became a scum, was soaked up with little balls of cotton wool at the end of a stick, and then squeezed into the small ornamented bottles in which it was some years ago exported. The finest otto is obtained from Herat, in Persia, where the roses that yield it grow in greatest profusion.

OVARIAN DROPSY.—This distressing and unfortunate disease can, as the name implies, only occur in females, and consists of an accumulation of water in one of the ovarian cells, causing the abdomen to swell to such an extent that the patient appears to be in the last stage of pregnancy; and when the disease (as it very often does) takes place in unmarried and virtuous young women, the shame and unhappiness it causes can easily be imagined. To convey a clear idea of this disease, it must be borne in mind that the *ovaries* resemble a split walnut in size and shape, each being composed of numerous minute cells, in which the *ova* are contained. See Pregnancy for a fuller account of the physiology of these organs. It is in one or other of these cells that the germs of the disease commence, first causing a mere trivial enlargement of the cell; in time, however, the mischief extends, water, or a serous fluid, is collected, and eventually a round tumour begins to be perceptible, either on the right or the left side, according to which ovary is affected. In time the tumour reaches the centre of the abdomen, and begins to manifest itself by the increased bulk of the female, and by its evident protrusion; the patient, if she is a married woman, fully believing herself to be pregnant; and it is only by the absence of all motion, and the usual period passing by without exciting the natural pains, that the true nature of the disease is dimly conjectured; but when once suspected, however it may tax the patient's feelings to know she must carry about with her a hopeless disease, there is no shame, no dishonour in the matron's misfortune. But for the poor girl who, without mother or female confidant, finds herself mysteriously invaded by this malignant disease, and, at every stage of a malady that should command pity, is exposed to further contumely and shame, the position is one of the most painful and humiliating that suffering woman can be called upon to endure. See Womb, Diseases of.

OVUM.—An egg, from which is derived the word *ovaria*, or the *ovaries*, two small oval bodies placed near the fimbriated extremity of the fallopian tubes. See Womb.

OXALIC ACID.—This strong vegetable acid poison is usually procured in the form of small pointed crystals, and though occasionally found in nature in the form of an oxalate of lime, is obtained in the greatest abundance from the plant known as the "wood sorrel," the *Oxalis acetosella*. The only salts with which oxalic acid could be confounded are white vitriol and Epsom salts, from both of which, however, it is distinguished by the size and obtuseness of its crystals, by their greater lightness, and by their always appearing dry or *efflorescent*, while the others almost always appear moist and gleaming. Oxalic acid is never used in medicine, but is largely employed as a cleanser of leather, straw, linen, and many other articles, hence its easy possession by grooms (to clean boot-tops), straw bonnet makers, and dyers and bleachers. Whether taken accidentally or wilfully, oxalic acid acts as a speedy and violent poison, causing excessive pain, exhaustion, collapse, and death often within an hour, and that, too, without exciting vomiting. The first duty in a case of supposed poisoning by oxalic acid is to give a speedy emetic, and then attempt to neutralize the potency of the poison by magnesia, chalk, or carbonate of lime, with each of which the acid unites, forming an inert oxalate. Each of the above articles—*or the mortar from walls, if those are not to be procured*—must be mixed with plenty of water: and the dose repeated after each vomiting. When exhaustion or the stage of collapse takes place, stimulants must be given. See Poisons.

OUNCE, AN.—The sixteenth part of a pound avoirdupois, or 480 grains. An ounce is divided into 8 parts, or drachms, of 60 grains, every drachm being further subdivided into 3 scruples, of 20 grains each. The medical symbol for an ounce (*uncium*) is ℥ when the substances are solid; but when liquid, the hieroglyph is preceded by an *fl*, for fluid ounce, as thus, *fl* ℥.

OUTFIT FOR AN EMIGRANT.—We have, in another place, entered at length on the articles most necessary in the way of comfort, of medicine, and of absolute necessity, with which all persons bent on a distant voyage, whether alone or with a family, should be supplied, and can only in this place request a careful perusal of the article Emigrant.

OX GALL.—This biliary secretion of the ox is only used in the arts as a detergent, to clean woollen fabrics; and we should not have given it a place here, had not some experimental physicians, who make test-tubes of the stomachs of their unfortunate patients, given this disgusting article as a medicine to those whom they believed stood in need of what they were pleased to consider as a tonic and stomachic.

OXIDES.—A name given to the simplest preparations of metals, and into which condition they must be thrown before they can be acted on by acids, so as to produce mineral salts. Oxides are a combination of a pure metal with oxygen, and their strength as medical agents depends upon the portion of oxygen taken up by the metal; thus one atom or portion of oxygen is called a *prot-oxide*, two atoms a *deut-oxide*, and three or more atoms a *per-oxide*, or an excess; all such preparations are very dangerous. Potass is an instance of an oxide and a base *potassium*.

OXYGENATION.—A term chemically employed to signify the union of oxygen in any proportion with a mineral, or any other substance.

OXYMEL.—Vinegar of honey. A compound pharmaceutical preparation, made by boiling vinegar and honey together, removing the scum as it rises, and setting apart to cool.

OXYMEL OF SQUILLS is another preparation of honey, made with the vinegar of squills, in such proportions as will insure, after boiling and cooling, a syrup of the usual strength and thickness. The oxymel of squills is used as an expectorant in cases of catarrhs, coughs, hoarsenesses, or colds, and is given either alone or combined in doses of from half a drachm to 2 drachms every three, six, or eight hours. See Squills.

OXY-MURIATE OF MERCURY.—Another name for the bichloride or muriate of mercury; otherwise corrosive sublimate.

OXY-MURIATIC ACID.—A preparation adopted, some years ago, as an anti-syphilitic, and for a time regarded as a specific in secondary ulcers, but now almost exploded from practice. This acid is only the ordinary hydrochloric or muriatic acid, with an additional increment of oxygen in its composition. The mode of prescribing was to mix 1 drachm of the acid with 7 ounces of water, and 1 ounce of simple syrup, a small teaspoonful being given every four hours in a little water, increasing the dose and the quantity of the acid gradually.

OYSTERS.—Though some medical men, judging rather by the idiosyncracies of their own constitutions than following the dictates of an enlarged experience, condemn the use of oysters, and that in all forms and in all cases, there is no doubt that the oyster is more universally acceptable to the human stomach as a food, whether in health or sickness, than any other fish, either of fresh or salt water, of the vertebral or crustaceous kind, and may almost always be prescribed to the invalid with advantage. The oyster, particularly when eaten raw, is easy of digestion, and remarkably nutritious; its digestibility and nutritive properties, however, are materially impaired by cooking, and though very tempting and piquant culinary preparations are made with it in the form of sauce, ragout, rolls, patties, &c., these effects are obtained at the sacrifice of the best qualities of the fish, and should be carefully shunned by the invalid. In cases of weak digestion and languid appetite, a few oysters, taken half an hour before dinner, will often be found to act both as a stomachic and provocative to appetite. See Food.

OZÆNA.—The surgical name of a disease of the nose, of a very foul and malignant character, sometimes affecting all the tissues from the bones to the cuticle of the nose, particularly of the nostrils. Ozæna depends upon a general unhealthy or depraved state of the system, and displays itself, in the first instance, by a swelling at the side of the nose, which, in time, breaking, discharges a foul, unhealthy kind of *sanies*, which after some days assumes the character of a healthy pus. In some cases, the septum of the nose and the small adjacent bones (the *ossa spongiosa*) are destroyed, and the wings of the organ so involved as to eventually sacrifice a large portion of the feature.

The TREATMENT of so formidable a disease demands a systematic course of tonic and corrective medicines to reform the constitutional depravity on which the local evil depends, while lotions of the chloride of lime, to stimulate and correct the fœtid discharge, should be applied to the part affected.

OZMAZOME.—A name given by chemists to a principle obtained from animal fibre, and on the presence of which the aroma peculiar to all cooked meats depends.

OZMUNDA REGALIS.—The royal fern; a variety of the fern family of plants, and said to possess the property common to all the tribe—that of an *Anthelmintic*, a medicine to destroy worms. The article, however, is now seldom used.

OZONE.—A name given by a German chemist to a peculiar state of, or substance in, the atmosphere, depending upon the amount of electricity at the time existing in the air. Whether this ozone is an imperceptible fungoid matter, floating in the atmosphere, or a redundancy or compound of oxygen, remains as yet undiscovered. All we derive from the fact is the hypothesis that the influenzas, catarrhs, and bronchial affections, so often epidemic, depend upon the presence of ozone in the atmosphere.

P

P is the sixteenth letter of the alphabet, and, as an abbreviation, is used among medical men in various senses. When employed in a prescription, P. stands for *pugil*, the eighth part of a handful; a very vague way of expressing quantity, and only used when the article ordered is *an herb*, rose leaves, camomile flowers, or other simples. P. Æ. stands for *pa* *æquales*, equal parts. P. also stands *pulvis*, a powder; and when P. P. is u signifies *pulvis patrum*, or Jesuits' p der; a name now obsolete. As a num P, like G, stands for 100, and with a d over it (thus, $\bar{\text{P}}$) for 400.

PABULUM.—A Latin word, signify food, aliment, anything taken into stomach which affords nutriment to system: whatever supports combus and ministers to nutrition. See Foo

PAD.—A surgical appliance, used take off unnecessary or hurtful pres from a part. A pad may consist mere pledget, a folded piece of lint, strip of linen doubled several times, placed under a bandage to effect a p sure. See COMPRESS. The form, ever, in which pads are most gene used is that of long, square, or triang bags, filled with bran, tow, wool, cotton, and either firmly stuffed, to resistant, like a pincushion, or lax, as to admit of being shaken up, and plied as a padding where required. are chiefly employed in cases of fract being placed between the broken b when reduced, and the splints, one each side of the injured member, to vent the cuticle from being chafed by pressure of the splints.

The firm, triangular, or round pads used for placing in the armpit, and square or long to lay over the fractur cases of broken collar-bone.

PADS FOR FRACTURES.

PAIN.—Whatever may be the prim cause of pain, whether proceeding fr pressure or inflammation, it can only regarded as a symptom and provision Nature to make us aware of some inju local or general, taking place in system; and as pain, especially when long-continued and severe, has always a depressing and hurtful effect on the resistant energies of the mind and body, it becomes the duty of the physician to mitigate or subdue it as quickly as possible. Some persons, according to their organization or temperament, are much more sensitive to pain than others, and a suffering which some individuals would bear with complacency, or with but little expression of distress, will completely prostrate others less firmly constituted; indeed, in some finely organized natures, pain, even of an ordinary character, exercises so powerful an influence over the mind and body, and is a subject of such real alarm, that they would rather die than submit to the brief but necessary pain inflicted by the setting of a fractured bone, or the adoption of those surgical means requisite to insure recovery. The untimely death of one of England's greatest statesmen, a few years back, because he dreaded to encounter the suffering which would attend the reducing a broken collar-bone, is an illustration of such extremely sensitive organizations. There are many kinds and degrees of pain met with in disease,—the hot, burning pain, as that of carbuncle or boil; the dull, heavy aching, as in congestion, or pressure on some organ; the sharp, lancinating; the grinding pain; the plunging, throbbing pain; and the fugitive pains, that, with sharp darts, fly about the body; each form and degree indicating particular affections, or structures diseased; the most unyielding and insensible structure when in health, being, when diseased, the seat of the severest pain. Of all kinds of pain, however, that which arises from a direct affection of the nerves, as in neuralgia, is the most intolerable, as evidenced in the agony of tic-douloureux.

Though it is through the mind that we are made conscious of every kind of pain we suffer, the mind may often be made a means of mitigating the suffering endured, by employing it, and, if possible, the body with it, in some active occupation or agreeable labour; anything, in fact, that gives employment to the mind will tend to assuage the grief of the pain endured.

The usual means employed to subdue pain are the *anæsthetics*—chloroform or ether, with opium, and all the narcotic anodyne agents, while bleeding and the hot bath are among the constitutional and best remedial accessories for the same purpose, these acting as correctives by removing some of the causes which had induced the pain. As a general rule, it is injudicious to give sedatives to overcome pain, unless in combination with some remedy for the exciting cause, while such remedies as chloroform should never be employed without professional advice.

PAINTERS' COLIC.—This disease derives its name from the fact that painters are more frequently attacked by it than persons of other occupations, though habitual cider-drinkers, and people of various callings, are sometimes liable to its attack. As the cause in all cases is the presence of lead in the system, absorbed through the skin by contact with paints containing preparations of that metal, especially those known as white and red lead, or taken into the lungs from the fumes during smelting, or else received into the stomach by drinking liquors or water kept in leaden cisterns, it will be readily understood how many persons, coming in contact with easily absorbed minerals, may be affected by all the symptoms of this very serious disease, the special peculiarity of which is the tremor of the hands, and sometimes of the head and legs—a mild form of paralysis that attends it. For the symptoms and treatment, see article COLIC, PAINTERS'.

A preparation made with a decoction of senna leaves, Epsom salts, and antimonial wine, and given till it acts effectually on the bowels, has received the name of the PAINTERS' PURGE, from its supposed efficacy in the disease of painters' colic.

PALATE, THE.—By this name is understood the whole arch or roof of the mouth, anatomically divided into the hard and soft palate. The bony arch of the palate, or mouth, is formed by the thin plates of the superior maxillary, or bones of the upper jaw, and by the palate and spongoid bones. The soft palate is composed of a peculiarly corrugated expansion of the lining membrane of the mouth, which, commencing at the gums of the upper jaw, runs backward, firmly attached to the bony roof, till nearly over the base of the tongue, when it falls and hangs like a valance, with the *uvula* in the centre, while a fold or process on each side runs down to be attached to the gums near the tongue. Within each fold is enclosed the gland known as the *tonsil*. This valance, or hanging portion of the palate, forms the opening known as the *fauces*.

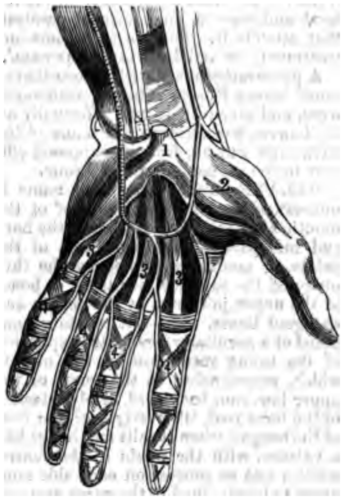
By this arrangement, the food, in the act of swallowing, is prevented from re-entering the mouth, while by the nerves diffused over the corrugations of the palate, the sense of taste and the enjoyment of our food is greatly enhanced. See DIGESTION, *cut*.

The palate is sometimes imperfectly formed, and, instead of being a perfect arch, rises in a sharp angle in the centre, or else is preternaturally flat, in either case interfering considerably with the proper enunciation. It is also sometimes deformed by a fissure along its centre, producing the malformation known as Hare Lip, which see.

PALATO PHARYNGEUS.—The name of a short muscle of the mouth, which, rising in the *pharynx*, is inserted into the *velum*, or hanging portion of the soft palate, its action being to draw down the parts forming the *fauces*.

PALLIATIVES.—A name given to such medicines as merely relieve an urgent symptom, without in the least effecting a cure of the disease.

PALMA.—The palm of the hand. From this word anatomists derive the term *palmar aponeurosis*,—a strong fibrous covering to the palm of the hand, extending over the whole part, and binding down the muscles in their several situations. This firm, tough, glistening texture is composed, in part, of the tendons of the small muscles of the palm, and what is called the annular ligament of the *carpus*, or wrist. On the removal of the palmar aponeurosis, two arches are discovered, formed by bloodvessels,—one, the most superficial, formed by the ulnar artery; the other, or deep-seated, by the radial artery. The convexity of each arch is towards the fingers, a small branch given off from the arch running to one side of each finger, as the bow approaches the different members; a branch from the deep-seated arch proceeding to the opposite side or back of each finger, till every member has a branch on each side.



THE PALM, SHOWING THE MUSCLES, TENDONS, AND BLOODVESSELS.

1. Tendon of the muscle that draws together the thumb and little finger, the Adductor. 2. Superficial palmar arch, supplying the four fingers. 3. Tendons of the Flexor muscles of the fingers. 4. System of transverse and crucial ligaments, binding the several joints.

PALMA CHRISTI.—The botanical name of the castor oil plant.

PALMARIS BREVIS, AND PALMARIS LONGUS.—Two sets of flexor muscles, one rising from the wrist, the other from the condyle of the *humerus*, and both inserted into the palm, to bend it upwards.

PALM OIL.—This concrete oil, now so largely used in the arts, is obtained from the nut of the *Coccus butyracea*, a variety of palm, a native of South America, though most largely imported from Western Africa. The oil is obtained from the yellow pulp of the fruit. The hard stone found in the pulp contains a kernel, which also yields an oil, but *white*, and always concrete, even in Africa; whereas the common yellow palm oil is always fluid in Africa, and only concrete on reaching our northern regions. The palm oil is consumed in vast quantities by the natives, eaten with their rice and fish, when mixed with pepper, and is to the African in all respects what olive oil is to the Spaniard and Italian. The white oil from the kernel is only used as an unguent, to soften the skin and check excessive perspiration.

Palm oil, though possessing all the properties of olive oil, is, from prejudice, never used internally in this country, and is only employed medicinally as a soft, lubricating embrocation for sprains and bruises.

PALO DE VACA.—The cow tree of South America. See COW TREE.

PALPEBRARUM APERIENS RECTUS, AND LEVATOR PALPEBRÆ SUPERIORIS.—Muscles to open or lift up the eyelids.

PALPITATION.—There are few

more distressing, or often more ; to the sufferer, than palpitation art, the importance of the organ adding to the alarm of the patient. ral, however, palpitation is more nal than an organic disease, and te constitutions may proceed from at have nothing to do—directly, -with the heart. These irregular nts, as they are called, of the ay consist of a mere occasional -transient, indeed momentary, in ion,—or they may be hard, steady, mitting beats, sometimes only ien the patient is in bed, or lying de; or they may be so loud as to le to a stranger at the other side room, and at the same time so as sensibly to move the clothes that part of the chest. Palpita- sometimes accompanied by what l *bruit de soufflet*—a peculiar be described under Stethoscope, ttended by a feeling of sickness xiety, with a pulsation at the e stomach, and not unfrequently ings, and even *syncope*.

les are more subject to palpitation les, and those of a *nervous* tem- t, and of a weak, relaxed habit of uch more so than those of a *san-* temperament, and of a robust tion.

xciting causes are generally strong motions, such as great or sudden joy, violent exercise, or whatever es or relaxes the frame. Young suffering under catamenial irre- , chlorosis, or delicate women in y months of pregnancy, are the most liable to this affection. It by a close observation of his condition, by a frequent and scrutiny of the pulse, and by the e stethoscope, that the physician evere cases, detect the presence of mischief as the direct cause of ion. But as organic disease of t is a rare circumstance in connec- h this affection, we shall confine arks on the treatment to the most forms of palpitation, viz., those ctional origin.

ment. — When the patient is nd PLETHORIC it will be necessary l, both locally and generally; to the heart's action by nauseating es; to influence the bowels by ut not violent cathartics, and to he diet. These several objects are fected, in the first place, by taking from eight to ten ounces of blood from the arm, by abstracting six or eight ounces more by means of the cupping-glasses applied over the region of the heart, and afterwards, if necessary, laying an opium or belladonna plaster on the left side of the chest. The pulse and heart's action can be lowered by the following mixture. Take of—

Tartar emetic	3 grains.
Powdered nitre . . .	10 grains.
Mint water	6 ounces.

Dissolve, and add—

Tincture of digitalis .	2 drachms.

Mix: two tablespoonfuls to be given every three hours till nausea is produced, and two of the annexed pills night and morning till they operate freely.

Take of—

Aloes and myrrh pill .	1 scruple.
Compound colocynth pill	1 scruple.
Blue pill	1 scruple.

Mix, and divide into twelve pills. With a low diet, strict attention must be paid to the state of the mind and body.

There are two other remedies, either of which, in some cases, might be employed, and would obviate the necessity of all other means but the pills; these are hydrocyanic acid and chloroform; but these are remedies that should never be used in such a case unless prescribed by a medical man.

In cases of NERVOUSNESS or debility, the much more frequent aspect in which palpitation presents itself to our notice, the treatment is almost the reverse of this, and demands air, tonics, salt water baths, exercise, cheerful society, change of air, and a light but nutritious dietary. When chlorosis, or female irregularity, is the predisposing cause, change of scene and the chalybeate waters, as those of Tunbridge Wells, with one of the above pills every night, or three times a week, should be the practice adopted, with either the cold or sponge bath every other day, accompanied with gentle exercise, and such a diet as has been suggested, beef and mutton being selected as the animal food in preference to white meats of any kind. The patient's strength must be supported, by a judicious amount of wine in conjunction with the dietary, and by tonics, in the form prescribed below. Take of—

Aromatic confection .	1 drachm.
Quinine	10 grains.
Camphor water . . .	5 ounces.
Compound tincture of bark	1 ounce.

Mix: two tablespoonfuls to be taken twice a day.

When EXTREME NERVOUS IRRITABILITY is the exciting cause of palpitation, the patient's mind must be soothed by an assurance that the affection is only *functional*, and that all cause of apprehension may be dismissed. Extreme quietude must be observed, the horizontal attitude frequently adopted, and some anti-spasmodic medicine, such as the following, given occasionally; at the same time, it may be necessary to blend some portion of the treatment just recommended for the chlorotic class of cases with the means special to nervous patients. Take of—

Compound tincture of valerian	4 drachms.
Spirits of sal volatile .	1 drachm.
Compound spirits of ether	1½ drachms.
Tincture of lavender .	2 drachms.
Camphor water . . .	5 ounces.

Mix: two tablespoonfuls to be taken three or four times a day, if required.

Should the palpitation be obstinate, or of frequent occurrence, a blister ought to be placed over the region of the heart, and the feet put occasionally in hot water. When the disease is attended with headache, bile, or indigestion, two or, if necessary, three of the pills already prescribed in this article, or a simple 4-grain blue pill, should be taken at bedtime, and the following draught on the morning after.

Take of—

Powdered rhubarb . .	15 grains.
Carbonate of potass .	10 grains.
Powdered ginger . .	5 grains.
Infusion of senna . .	1½ ounce.

Mix in a mortar, and make a draught.

In all forms of palpitation, strict attention must be paid to the state of the stomach and bowels, and the diet, exercise, and the use of the bath, regulated according to the predisposing cause of the affection, and the chief symptoms of the case.

PALSY, OR PARALYSIS.—A disease of the nervous system, either arising in the brain or the spinal marrow, and accompanied by a loss of motion or of feeling, or of both, in a part, in the half, or the whole of the body. Palsy, therefore, is either general or partial. General palsy is that condition of the disease where the whole body is involved, and the late robust man is laid prostrate and helpless, his limbs and muscles chained in a cold and death-like immobility, powerless, helpless, while the fettered tongue, incapable of motion, leaves nothing living in the unhappy captive but the beseeching eyes and quick imagination. General palsy, however, is a much rarer condition than one or other of the forms of partial palsy.

Of the local varieties of paralysis, the following are the most frequent examples met with:—

HEMIPLEGIA, or palsy affecting one entire side, from the centre line of the head and face downwards; and though it may attack either the right or the left, it is most frequently found involving the *left* side of the body.

PARAPLEGIA.—Palsy of the lower half of the body, either beginning across the loins, and affecting the bladder and all the organs below the line of demarcation, or sometimes only affecting the two legs, and leaving all the other parts uninfluenced. On some occasions, however, paraplegia commences much higher up, indeed, from below the neck.

PALSY OF THE FACE.—In this form of local paralysis, according to the nerves whose roots are affected (whether the motor nerves, or the sensific branches of the fifth pair), there is either partial or total loss of sensation, or there is a convulsive motion of the muscles, particularly during mastication, both ludicrous and painful to witness.

STRABISMUS.—Squinting; a condition of palsy in which one or both eyes are drawn outwards, downwards, or obliquely, in such a manner as to produce an unpleasant effect on the countenance.

PTOSIS.—A palsy which affects the upper eyelid, by which it falls over the eye as in sleep, and can only be elevated by the finger of the patient.

LAGOPHTHALMIA.—This is a form of palsy the very opposite of the last, for instead of the eye-curtain losing its nervous energy, and falling over the ball, the lids are so firmly drawn up that no force of will on the patient's part can bring them down, and he consequently sleeps with his *eyes open*.

APHONIA.—In this variety of the disease the palsy attacks the *larynx*, or organ of voice, and though the tongue may move, no articulation follows the motion.

There is yet another form of paralysis—the AGITANS, or shaking palsy,—which, without being actually general, may involve the legs, arms, and head at one time, or only affect one of those parts. Of this we shall have to speak presently.

As the brain is the general seat of this disease, the manner in which it is affected shows itself in the effect produced on the body. If the *right* half, or hemisphere, of the brain is injured, the *left* half of the body will be paralyzed, and *vice versa;* whereas, if both halves of the brain are affected, the whole of the body, from or to a certain point, will be paralyzed.

The SYMPTOMS which indicate the approach of palsy are often of the most conflicting character, and are so obscure as to baffle the sharpest penetration. In many, indeed, in very many cases, there are no tangible appearances whatever by which a probability of the disease may be formed, or a suspicion excited as to its approach. The person, full of health and strength, goes to bed, declaring that he has never felt better in his life, perhaps rejoicing in his manhood and his good fortune, and the dawn of day finds him a helpless, speechless, paralytic child, dependent for every service, even that of interpreter of his looks, to friends or strangers. This, perhaps, is the most awful form in which this terrible disease—that in an hour may reduce us from youth to age—can afflict its victims. Sometimes, however, there are well-marked premonitory symptoms, or causes sufficient to indicate the probability, and even the certainty, of such a result taking place. Thus, apoplexy occurring at a certain age, and in peculiar constitutions, epileptic fits, congestion of the brain, compression, effusion, and severe accidents to the head, or violent emotions, such as bursts of ungovernable passion, are among the most usual exciting causes of paralysis in the robust or adult man or woman. With the old and debilitated, palsy is often a disease of slow and gradual growth, coming on, like advancing years, almost imperceptibly, caused either by a softening of the brain, or an effusion of serum from the weakened vessels of the head, which, gradually filling the ventricles, and pressing on the origin of sets of nerves, produces, after a time, all the symptoms of a well-defined paralysis. A not unfrequent cause of palsy is the rupture of a small bloodvessel within the skull. Such a casualty may occur without inducing apoplexy, or exciting much more alarm than a sudden fainting, a brief confusion of ideas, and a few days' headache. After a time, however, there are noises in the ears, motes are seen before the eyes, with deafness, loss of memory, and so on, till the grim symptom that too legibly stamps the disease shows itself in all its hopeless characters.

The persons most liable to palsy are those of a naturally debilitated constitution, robust men with short necks, persons of violent tempers, and those accustomed to give way to fits of passion, and, lastly, literary men, and those whose brain is always at work in schemes of policy, interest, or ambition. One of the peculiarities of local paralysis, especially when it affects the head and face, is that while one half of the countenance beams with mirth and smiles, the other side has the cold, unspeculative aspect of the dead. The loss of motion in such cases is not always so marked as the loss of sensibility, the patient sometimes complaining of pain in a part, which may be cut, burned, or punctured without his being sensible of the fact by the consciousness of pain. The only symptoms by which a non-professional person could form an opinion as to a probable fit of palsy are constant headache, confusion of ideas, loss of memory, impaired vision, deafness, constant drowsiness, and a *pricking* sensation in some part or other, generally that about to be attacked.

TREATMENT.—Before entering on this branch of the subject, we may observe, that where the disease has once fairly manifested itself before medical relief has been sought, the expectation of a radical cure is next to an impossibility. The fearful grimaces of the countenance sometimes seen may be mitigated, the trembling limbs may be strengthened, and the sputtering articulation improved, but the once-sound man will never again be made whole; some twitching of the mouth, some tremor of the hand, or some dragging of the foot, will remain to the last, to remind him by contrast of what he once was.

The treatment of this disease in the plethoric and strong is almost identical with that given under the head of Apoplexy, and comprises bleeding from the jugular vein or arm, leeches to the temples, a blister down the spine of the neck, or cupping-glasses applied to the nape, or between the shoulders; a powerful action established on the bowels by calomel, aloes, and elaterium, or by croton oil and black draught; cold to the head and hot water or mustard poultices to the feet, and by the adoption of the antiphlogistic system. See APOPLEXY. If the paralytic symptoms continue after the abatement of the congestion, or state of plethora, a seton should be formed in the neck, and strychnia—the only remedy that acts directly on the nervous system—employed. The remedy, however, is so dangerous, that no non-professional person would be justified in prescribing or using it. The dose is *one-twelfth of a grain* twice a day. The mode of using this remedy is to mix 1 grain of strychnia with 1 drachm of lump sugar intimately in a mortar, and then to add enough extract of gentian or camomile to make the whole into a mass, which is to be divided into twelve pills, one of which is to be given night and morning. From the effect that strychnia sometimes produces, it may be necessary to stop the use of it *instantly*. A much safer mode of employing this drug is externally, by means of a small blister, half a grain being put on the centre of the blister, which is then laid over the course of the nerve in the leg, arm, cheek, or wherever the affection may be chiefly situated. The next agent to strychnia in importance is one that is perfectly free from every risk, and may be as safely prescribed by a non-professional as by a medical man; that agent is electricity, or rather medical galvanism, transmitted in sparks or streams through the different parts from a battery or machine; or what is far superior, by wearing for a few hours every day a set of Pulvermacher's galvanic chains and belts. By the proper application of these, a steady current of galvanic fluid will be carried through the spine and base of the head to the several parts affected. For the value of these chains, see Medical Galvanism. As stimulating local applications, embrocations and liniments are frequently prescribed to rub the limbs affected, such as turpentine in which mustard has been macerated, or turpentine, oil of amber, and hartshorn. A mixture of equal parts of dry flour and mustard is sometimes employed, and with good effect, in the paralysis of old age; a large stocking is drawn on either leg or arm, and all the space around the limb filled up with the above powder, which is to be tied on and so worn for one or two days. Sulphur baths and fumigations are sometimes employed with good effect, while cold salt-water bathing, and friction with the flesh-brush, are means which must never be lost sight of. The bowels must be kept open by warm, active purgatives, such as two compound rhubarb pills, and a draught composed of *1 scruple* of powdered rhubarb, rubbed down in 1½ ounce of peppermint water, to which 20 drops of sal volatile is added.

When the bladder is affected by the palsy, there is often a painful retention of the urine; in such cases, it may be necessary to use the catheter once or twice a day. When there is a suppression of the secretion, draughts of linseed tea, with a few grains of nitre, and 5 or 10 drops of tincture of cantharides, should be given two or three times a day, or a pill, composed of 2 grains of camphor, and 1 grain of opium, and the same of ipecacuanha powder.

Change of air and scene, with the Bath, Buxton, or Cheltenham waters, and a full, nutritious diet, are indispensable adjuncts where the patient has the means to procure them. Tonics and chalybeates too are necessary, and should be so employed that the patient's strength should never fall below a certain standard. Among the external remedies employed to restore warmth and sensation to a limb, the practice of *urtication*, or stinging with nettles, must not be omitted (see Nettle); or that of *acupuncturation*—exciting the part by tattooing the limb with needles.

There are two forms of palsy which may be called accidental—those induced by the poison of lead and mercury, and which may be cured by removing the exciting cause, and expelling the minerals from the system.

PALSY, TREMBLING.—This form comes on by degrees, and often very slowly, the shaking beginning in the hands, legs, or head, and gradually extending over the whole body, till the trembling becomes incessant. The difficulty of walking without being thrown on his toes often compels the patient to run, to avoid falling. As the disease advances, the trembling continues through the night as well as day; shame, or a stranger's observation, increases his tremors, and so agitates his frame that he can neither move nor articulate. At length he is unable to lift anything to his mouth, the power of swallowing is impaired, and the capability of expressing his thoughts or wants is lost, and the second childishness, that renders him utterly helpless and unconscious, at length closes the scene.

It is in the earlier stage of such a case as this that trembling palsy may be benefited, though *not* cured, by the treatment we have so lately given, and which, to recapitulate, is embraced by attention to the bowels, change of scene, tonics, good living, and wine; by hot or cold salt-water baths, by friction, by stimulating liniments, the mustard and flour, and by the steady employment of Pulvermacher's galvanic belts.

PAMPLEGIA.—The name given to paralysis of the whole body. See PALSY.

PANACEA.—A universal medicine, regarded as a specific for every human ailment. Among the old chemists, the word was also applied to a mercurial preparation—the *panacea mercurialis*,—being a highly purified, or, as it was termed, *sweetened* submuriate of quicksilver, or calomel; hence the popular name of *sweet mercury*, still applied to that article.

PANADA.—A light, nutritive food for children and invalids, made by boiling over a slow fire crumbs of bread, either with water or milk, and then beating into it the yolks of two or three eggs, sweetening to taste, and flavouring with nutmeg, mace, lemon, or whatever spice or flavour is desired. The great art in making panada is to add the water or milk in small quantities, and only when the former addition has been absorbed and thoroughly blended with the bread. When milk is used, the bread-crumbs are first to be moistened with water over the fire, and, when perfectly soft, the milk is to be added.

PANADO.—A pap made from bread for young children. See above.

PANCREAS, commonly known in the lower animals as the Sweetbread, is a large flat gland, somewhat resembling the tongue of a dog, composed of innumerable small glands, and situated in what is called the epigastric region, almost under the stomach. Each small gland is united to its fellow by a minute duct; these ducts form a main tube, termed the pancreatic duct, which, joining the biliary duct, eventually terminates in the duodenum, into which organ it pours its salivary secretion, to assist in the separation of the chyle from the chyme. The special object of the pancreatic secretion is supposed to be to dilute the acrid quality of the bile before that fluid is poured upon the digested aliment.

PANCREATIC JUICE.—The secretion of the above organ has always been supposed to be necessary to perfect digestion, but the manner in which it acts beneficially has never been clearly explained, or, indeed, discovered. By some physiologists it is supposed to subdue the acidity of the bile, and by others to have a special solvent power on those fatty matters which could not be otherwise acted on. But the entire organ has been removed from dogs, and the pancreas known to be hopelessly diseased in men, and digestion has nevertheless remained uninfluenced, either in the one instance or the other.

PANIS.—The Latin for bread; a loaf. A word sometimes used by physicians in their prescriptions, when ordering crumbs of bread (*micæ panis*) to be used in pills.

PANNUS.—A surgical name for a folded piece of cloth: a tent for a wound. See TENT.

PANNUS.—A name formerly given to a disease of the eye; an obscuration of the cornea; a kind of web.

PANSY.—The heartsease. This well known and beautiful flower, though no longer regarded as of any value in modern practice, was once greatly esteemed in many disorders, particularly in epilepsy, affections of the lungs, the convulsions of teething, and several others, the flowers, leaves, and root being employed either as a decoction or a syrup.

PAPAVER OFFICINALIS.—The poppy. See OPIUM, and POPPY-HEADS.

PAPILIONACEOUS.—A botanical order of flowers, so named from the disposition of their petals, resembling a butterfly.

PAPILIO.—With extended wings. The most familiar examples of this flower are the pea, and the blossoms of other leguminous plants.

PAPILLÆ.—Small, hard, conical elevations, in shape like extremely minute nipples. Papillæ are found in many parts of the body, where they serve the purpose of glands. Many eruptive diseases present themselves in the first stage in the form of a crop of minute pimples or papillæ, which disperse in dry scurf, or enlarge and become vesicles, filled with a clear or straw-coloured fluid, and eventually die and fall off in scales of dry cuticle.

PAPULA.—A pimple; a small suppuration with an angry red point, the consequence of an unhealthy state of the system from bad feeding, or a sudden change to a rich diet from a poor one.

PARACENTESIS.—This is a surgical term for the operation of perforating a cavity, to draw off any collection of fluid it may contain, as in dropsy. The principal operations of this nature are performed on the chest (*paracentesis thoracis*), on the abdomen (*P. abdominis*) and on the skull (*P. cranii*). See Tapping.

PARADISE, GRAINS OF.—The larger cardamom seeds—a beautiful aromatic carminative; but the lesser seeds, and of a smaller variety, are supposed to contain more aromatic properties than the grains of Paradise; hence they are generally preferred in pharmacy, both in making tinctures and in the form of powder. See Cardamoms.

PARAGORIC.—Any medicine of an anodyne property to cure pain. See Paregoric.

PARALYSIS.—The medical name for Palsy, which see.

PARALYTIC STROKE. See Palsy.

PARAPHYMOSIS, and PHYMOSIS.—Names given by surgeons to *two* conditions affecting the prepuce in men. In the first, that membrane is drawn behind the *glans*, and in the second, drawn so closely forward that the *glans* cannot be uncovered. Though these cases are sometimes *congenital*—born with the person—in general the accident is the result of disease. In either case an operation is the only remedy for the misfortune.

PARAPLEGIA.—A paralysis of the lower half of the body, or only of both lower extremities. See Palsy.

PARASITES.—Medical men use this word to express all living things which prey on man, whether within or on the surface of the body, particularly as respects worms and vermin.

PAREGORIC.—A medicine to mitigate pain, and comfort the system. Paregoric elixir is the compound tincture of camphor according to the London, and the tincture of opium and camphor according to the Edinburgh Pharmacopœia, and is composed of camphor, opium, benzoic acid, and oil of aniseed, macerated in proof spirits for seven or ten days, and then filtered, each ounce of the tincture or paregoric containing about 2 grains of opium. Paregoric, according to the quantity given, may be made to act as a stimulant, sedative, or as an expectorant; in which latter form, in coughs, colds, and other bronchial affections, it is chiefly employed in doses of from one-half to 1½ drachms. There is another preparation of the same name, called the Scotch paregoric elixir, used as an antispasmodic in addition to the other purposes for which the first or English paregoric is employed; but as it contains double the quantity of opium, the dose is consequently just one-*half of that* of the first. See Opium.

PAREIRA BRAVA.—The wild or bastard vine; a climbing plant, native of South America and the West Indies. The root of this plant is the only part used in medicine; it is imported in round, flat, or irregular masses, some inches in circumference, and from half a foot to two feet long; it is fibrous, devoid of smell, and of a slightly sweetish taste, but leaves a bitter sensation in the mouth.

Its principal action on the system is as a diuretic, and the diseases in which it is chiefly employed are dyspepsia, urethral discharges, such as gleets, and chronic affections of the bladder; care being taken not to employ it in any case where there is active inflammatory action going on. An infusion of the root is the general form in which this medicine is employed, but its powers are augmented when combined as below, and when given in half wine-glassfuls three or four times a day.

Take of—

Pareira brava and Dandelion root, of each, cut or bruised . . .	1 ounce.
Boiling water . . .	2 pints.

Infuse for six hours, strain, and when cold put the mixture in a well-closed bottle.

PARENCHYMA.—A term applied by anatomists to the solid tissues of any organ, apart from the vessels, arteries, or veins that pass through or come out of its structure. The solid part of the lungs, liver, and other glands and organs.

PARIETAL.—The name of the two lateral bones of the skull, united above by the sagittal suture, formed by the interlacing of the two parietal bones; joined below to the temporal by the squamous suture; behind to the occipital bone by the lamboid suture, and united in front to the frontal bone by the coronal suture.

PARILINE.—A name given to the active principle of the sarsaparilla.

PARMENTIER'S ASTRINGENT GARGLE.—This, a once somewhat celebrated nostrum for relaxed sore throats, is composed of a decoction of oak bark and rose leaves in soft water, in the proportions of 1 ounce of the first, 1 drachm of the second, to 1 pint of the last; the strained liquor is then sweetened with honey, and a drachm of alum dissolved in the whole, the gargle being used three or four times a day.

PARONYCHIA. — A slow-forming and extremely painful abscess, occurring under the nail of any of the fingers or thumb. See Whitlow.

PAROTID GLAND.—The name of one of the most important of all the salivary glands of the system. This organ, the chief source of the saliva expended in mastication, is of a quadrilateral shape, situated partly behind and partly under the ear on each side, between the external auditory passage, the mastoid process by the temporal bone, and the angle of the lower jaw, extending above to the *zigoma* of the cheek bone, and forward to the *masseter* muscle. The parotid gland lies with its base outwards and the apex inwards, from which proceeds the duct that carries into the mouth the secretion of the organ. This duct, after passing over the masseter, perforates the *buccinator* muscle, and enters the mouth through the lining membrane, exactly opposite the second molar tooth of the upper jaw. The situation and boundaries of this gland, and the position of its duct, are of the utmost importance to all surgeons operating in the neck, as not only the external carotid artery and jugular vein pass through the centre of the gland, but many important nerves are situated about it, demanding the utmost skill and care in operating in a locality so beset with dangers to be avoided. For the functions of this gland, see SALIVARY ORGANS.

PAROTITIS, or CYNANCHE PAROTIDEA.—Names given by physicians to an inflammatory affection of the throat, affecting the glands on either side of the neck. See MUMPS.

PAROXYSM.—The access or fit of an ague, a fever, or any disease. The exacerbation, or fit of a disease.

PARSLEY (*Apium*).—This well-known culinary herb, though no longer included in the Materia Medica, possesses medicinal virtues which at least merit a mention in a work of this kind, as in cases of necessity it may be used always with safety, and often with great benefit. Parsley acts on the system as a diuretic, emmenagogue, and as a carminative. In all affections of the bladder and kidneys, gravel or stone, this plant was formerly very largely used, while the seeds, taken two or three times a day, will be found to exert a striking effect on the secretion of the uterus, in which respect, indeed, it may be often used with advantage. A poultice made of the bruised leaves and stems, with vinegar and water, was at one time considered a specific for the bite of all venomous reptiles. Parsley, chewed, has the property of destroying any fœtor in the breath, or the smell imparted to it from spirits, onions, or other articles.

Fools' parsley is an extremely dangerous herb, growing wild in dry, sandy places, and being not unlike the true garden parsley, has often led to serious consequences.

PARSNIP.—It is unnecessary to say more of this edible and well-known root, than that it is nutritious, and with many persons easy of digestion; it forms an excellent substitute for the potato, as it contains more than 90 out of 100 parts of saccharine matter. Its medicinal properties are somewhat heating, and on that account it should not be given to patients at all prone to inflammatory action. See FOOD.

PARTURITION.—A bringing forth; a being in labour—a word derived from *partus*, a birth. See LABOUR.

PARULIS.—Another name for an inflammation, swelling, or an abscess in the gums.

PAR VAGUM.—A name given by anatomists to the eighth pair of nerves. See NERVES.

PASTILLES.—Small conical masses, composed of carbon, spices, and essential oils, which when ignited emit fumes of incense.

Fumigating pastilles, though very pleasant to inhale in a lady's boudoir, are by no means well adapted for a sick chamber, where their heavy sweetness and perfume is more likely to produce nausea and headache than impart pleasure or refreshment.

PATELLA.—The kneecap; a small, flat, round bone, which, firmly attached to the muscular tendons and ligaments of both the leg and thigh, is kept like a moveable shield in front of the knee joint, to cover the articulation from accident, and afford a place on which to rest the body when in a kneeling position. The patella is sometimes displaced, and occasionally broken. See FRACTURE OF KNEE-CAP.

PATHETIC.—The name given to the fourth pair of nerves. See NERVES.

PATHOLOGY.—The science which treats of the preternatural condition of the human body; the aim of which is to discover the cause, nature, and difference of diseases. Physiology and pathology are so intimately united, that a perfect knowledge of the one is absolutely necessary to the understanding of the other. The science of pathology is differently divided, according to the judgment of the teacher. The following arrangement is one of the simplest systems now in vogue:—

1st. Pathology of the fluids.

2nd. Structural pathology.

3rd. Pathology of the circulating organs.

4th. Pathology of the nervous system.

5th. The pathology of the mind in its relation to the body.

PEA-MEAL.—This very nutritious article, whether used as a thickener for soups, made into puddings, or eaten as a brose or porridge, is equally worthy of notice, containing as it does so many of the best principles of nutrition. For mode of preparation and general utility, see MEAL.

PEAR.—This delicious fruit, like most of our finest fruits, belongs to the Natural order *Rosaceæ,* and is botanically known as the *Pyrus communis.* From the large quantity of saccharine matter contained in the pear, and the abundance of its juice, it has been long used for the purpose of obtaining a fermented liquor—perry—forming a sweet, sub-acid, and most grateful drink in warm weather.

PEARLASH.—An impure carbonate of potass, burnt red-hot to render it more pure. See POTASS.

PEARL BARLEY.—Barley freed from its husks, and formed into round grains about the size of small shot, of a pearly whiteness, from whence its name. See OATMEAL.

PEARL POWDER.—A subnitrate of bismuth, prepared in a peculiar manner, so as to obtain a brilliant pearly-white powder. Used as a cosmetic, chiefly by actresses.

PEARL-WHITE.—The same as the above. A subnitrate of bismuth.

PEAS.—There is no member of the family of lentils that approaches the pea in its flesh-forming properties; hence its great value as a dietetic agent. The *Pisum sativa,* the botanical name of this leguminous plant, is too well known to need description; and whether partaken of in the earliest stage of growth, as green peas, or when, hard and white with keeping, they are reduced to powder, they are equally serviceable to man as a food, though their flesh-forming and sustaining properties are only obtained from the mature seed. See FOOD and MEAL.

PEAS-ISSUE.—The article formerly so frequently employed to establish running sores, under this name, before the modern seton was substituted for the clumsy issue, was not a pea, but the hard, blighted bud of the orange blossom, smoothly turned on a lathe, and perforated with a hole, by which it was strung in long strings. See SETON.

PECCANT HUMOURS.—A name formerly given to any kind of diseased or unhealthy fluids of the body; thin and fœtid discharges, or any abnormal state of the secretions.

PECTINÆUS.—The name of a muscle of the thigh, which, rising from the rim of the pelvis, and inserted into the *femor,* or thigh bone, assists to flex the limb, and at the same time to rotate it outwards.

PECTORAL.—Belonging to the chest. Pectoral lozenges, pectoral mixtures, or pectoral plasters, are substances employed to relieve the chest from any oppression, as in colds, coughs, or bronchial affections, by causing a discharge of the phlegm or hardened mucus, which generally obstructs the air-passages in such cases.

PECTORALIS MAJOR AND P. MINOR.—The name of two sets of broad, flat muscles, which rise from the breast-bone and ribs, and being inserted into the arm and shoulder, serve to draw the arm forward on the breast to strike out, as in boxing, and also to elevate or draw up the body when the hands are fixed above.

PECTORALS are a class of medicines which allay or soothe a cough; of these the most common are the syrups of tolu and squills, paregoric, honey, ammoniacum, liquorice, linseed, aniseed, spermaceti, olive and almond oil, spruce, and syrup of poppies.

PECTORILOQUY.—A peculiar sound emitted from the chest in speaking when the lungs are ulcerated, or cavities formed in their substance. One of the sounds indicated by the stethoscope, or to the ear, if placed over the part, and the patient is requested to speak, is that the voice to the listener seems to come from the chest instead of the mouth; hence the term pectoriloquy, speaking from the breast. See STETHOSCOPE.

PEDICLE, OR PEDICULUS.—The small footstalk of a leaf, when used in a botanical sense; but medically the second is the name given to a filthy parasite found in the hair, and on the bodies of the diseased and dirty. For the eradication of such vermin, see SKIN, DISEASES OF.

PEDILUVIUM.—The professional name for a bath for the feet, whether hot or cold, though when prescribed it almost always implies a bath of hot water for the feet.

PELLAGRA.—A very foul condition of the skin, in which the cuticle loses all its natural characters, becoming squamous, or scaly, dry, discoloured, and thickened;

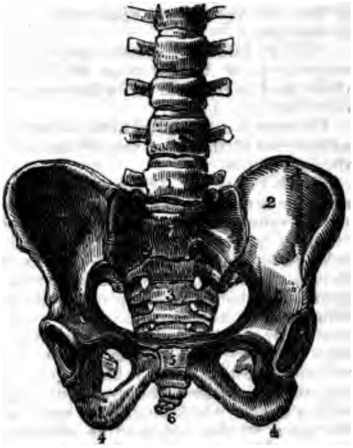
lt of bad living, and constant exto the weather. The disease is nd among the squalid and poor of habiting warm climates.

LETORY OF SPAIN (*Pyre-* —The dried root of this plant is part of it used in medicine in this ; and though it has been employed eatment of neuralgia, and as a diswhen applied to the skin, it is now d as an *errhine*, or snuff, when to powder and mixed with other nts; and as a *sialogogue*, to cause r of saliva, for which purpose, by ous action it provokes on the saliands when chewed, it has been ften of great benefit in toothache, ome conditions of neuralgic head-Pelletory of Spain has a warm, ungent taste, and directly it enters th exerts its action on the various glands, causing an abundant flow secretion.

LETORY OF THE WALL,—e of the common English Pellet is sometimes used as a decoction, ed with honey, for chronic asthmas, hard, dry coughs of old age.

LICLE.—A term used by surexpress the first delicate formahe skin that appears over a healing open sore; and by chemists, for that rises on certain fluid prepalike that which may be observed on a bowl of boiled milk set cool, before the firm skin is estabthat is certain to rise when the comes cold. Any very thin, transmembrane, like that which encloses of an egg.

VIS, THE.—An irregular bony onstituting the basin of the hips, ove and below, and having large on either side, for the transmission ies and nerves, and the passage of inside and out. The pelvis is p of several bones; thus the back of the last lumbar vertebra, the *um*, composed of five pieces, and ted by the *os coccygis*, conof four bones, which bend forward ward, somewhat like a cuckoo's om whence it derives its name of The sides and front are formed bones in the adult, but in childhood th by six; the set of three on each coming at adult age one compact These two side bones are called *innominata;* though for the cone of description they are always of as separate. Thus each *os innominatum* consists of the *os ilium*, the haunch or flank bone, the part generally denominated the hip; the *os ischium* below, upon which the body rests when seated, and the *os pubis*, or share bone, in front, where it is firmly joined to its fellow in the middle of the body, at what anatomists call the *symphysis pubis*, or union of the two bones. A shallow, circular cavity at the inferior and lateral extremity of each *os ilium*, called *acetabulum*, receives the head of the thigh bone, and forms, when the two are articulated, the hip joint. The holes observed in the sacrum are the apertures through which the spinal marrow, having descended the vertebral column, terminates in eight nervous cords, called from their streaming appearance the *cauda equina*, or the horse's tail. The various bones and apertures entering into the formation of the pelvis, give names to the muscles, vessels, nerves, and ligaments that belong to the cavity, or take their rise from it. The pelvis contains the bladder, most of the intestines, the ureters, and spermatic cords in man, and the uterus in the female. The pelvis is always wider from hip to hip, or ilium to ilium, in women than in men; and on the ample capacity of this



THE PELVIS.

1. The last Lumbar Vertebra. 2. The Ilium. 3. Os Coccygis, slightly elongated, to show, 6, the point or beak. 4. The Ischium. 5. The Symphysis, or junction of the two bones of the Pubes. 7. The Sacrum.

cavity in all directions in the former, depends the facility and often safety of the woman's confinement, especially as respects the dimensions of the inner rim.

The annexed cut will show the relative situations of the different bones, with their names.

PELVIS AURIS.—A name given to the cochlea of the ear.

PELVIS CEREBRI, or the Basin of the Brain, as that portion near the ventricles, and known as the *infundibulum*, is sometimes called. The name is also applied to a cavity in the kidney, between the organ itself and the commencement of the ureters. See KIDNEY, *cut of.*

PEMPHIGUS.—An obstinate cutaneous disease of a vesicular character, in which the eruption becomes filled with a pellucid fluid. Like all eruptive diseases, this form is always succeeded and attended by a certain amount of fever and constitutional disturbance. The disease is most prevalent among the poor and ill-clad; but generally gives way to alteratives, change of diet, and the mineral acids, with bark or quinine.

PENICILLUS.—A name applied by surgeons to a doubled piece of lint or cloth, used in the form or for the purpose of a tent. See TENT.

The term is also applied to the secreting extremities of the great vein of the liver, the *vena portæ.*

PENNYROYAL (*Pulegium*).—This aromatic herb, though now chiefly used to flavour sausages, is one of the most useful of all the family of the mints to which it belongs, both as a carminative, in cases of flatulence, and still more as an emmenagogue, for which purpose, given either in infusion or decoction, it becomes a medicine of great value, possessing the advantage of acting directly on the womb without affecting any other organ, or exposing the female to the risk of catching cold, a danger which attends too many of the usual articles employed as emmenagogues. The active principle of the pennyroyal resides in an essential oil, used to make the pennyroyal water. See WATERS.

PEPPER.—Under this head we shall treat of all those spices used as condiments which have not already been disposed of. The general characteristics of all peppers are a hot, fiery taste, a pungent aromatic odour; they are partially soluble in water, and act on the system as stimulants, anti-spasmodics, and carminatives. The chief of the peppers in common use are the black, white, the long, and the pimento or allspice.

BLACK PEPPER is the ripe berry of a creeping plant, the *Piper nigrum*, a native of the East Indies. The fruit grows in clusters of twenty or thirty together, or else hangs in bunches like currants. The berry, at first green, becomes red as it ripens, when it is gathered and exposed to the sun to dry. Under the great heat of a tropical sun, the pepper soon loses its bright colour, and becomes of a dark brown, nearly approaching to black. This, when well grown and dried, is the strongest of all ordinary peppers.

WHITE PEPPER.—This, the most esteemed of the two, *Piper album*, is less pungent than the black, though certainly the purest spice, and is merely the black pepper denuded of its husk. To prepare white pepper, the largest and soundest of the berries are first collected, then thrown into sea water for some days, taken out and rubbed in canvas, to remove the husks; they are then dried in the sun, and carefully packed for exportation.

PEPPER.

Though prescribed as a warm carminative, pepper is seldom employed alone, except so far as it is taken as a condiment with food, and is usually given medicinally in the shape of tincture or elecaromatic confection, or some other

G Pepper.—This is an extremely , hot, and pungent pepper, much ling cayenne in its strength, though ing all the aromatic properties of ite and black peppers. The *Piper* s grows in long, tapering, pod- . fruit, with a corrugated cuticle hat resembling a catkin, only more ıg, and of a dark brownish black . Long pepper enters into the com- n of the aromatic tincture, and of a ion given as a warm stomachic to s of weak or languid digestion, and e affected with piles; the dose being alf a teaspoonful twice a day for the and a small teaspoonful an hour dinner for the former.

LONG PEPPER.

he pepper tribe of plants belong to tural order *Piperaceæ*, and contain ny colouring matter, starch, woody allic and tannic acid, resin, earthy s, and alkaline salts; their active le depending upon a powerful con- il called *piperin*.

SPICE, or PIMENTO, sometimes Jamaica Pepper, has already been l under the head of Allspice, which d Cayenne.

PERMINT, the *Mentha piperitis*, most familiar and generally used of all the family of mints, and as a medicine, one of the most useful.

The active properties of the peppermint depend upon an essential oil, of which the plant yields by distillation a large quantity. It is this essential oil which, in one form or other, is the article used in medicine. Dissolved in spirits of wine, and stained green with parsley, it makes the essence of peppermint, so extensively sold in stamped bottles. Dissolved in spirits of wine, *without* colouring, and mixed with gum, starch, and sugar, it makes the grateful and refreshing confection known as peppermint lozenges; and again, when a small quantity of the colourless essence is rubbed down with sugar, mixed with water, and finally filtered through magnesia, it makes the peppermint water, or julep, so frequently used as a vehicle in mixtures for the drugs combined with it. Formerly all these medicinal waters were distilled from the plants or herbs from which they obtained their names; but now they are almost all prepared in the above manner. Peppermint, in any of its forms, is a warm, aromatic cordial, a carminative and stimulant, and in cases of colic or flatulence is as useful and certain a remedy as can be employed for the purpose. A few drops of the essence of peppermint, and the same of the essence or tincture of ginger, either in water or on a lump of sugar, will be found to afford immediate relief in cases of flatulence and colic.

PEPSINE.—An artificial gastric juice, recommended in cases where there is a deficiency of that natural secretion. See Gastric Juice.

PER.—A Latin preposition, signifying by or through, and often used as a prefix to chemical compounds as the opposite of *pro*, the former signifying *more* or the *most*, the latter *less* or the *least;* thus a *prot-oxide* indicates *one* atom, or the smallest proportion of oxygen the article can absorb; while a *per-oxide* signifies *two*, *three*, or more atoms, the utmost amount of oxygen it can take up. Some minerals have three strengths of oxygen, as indicated by their prefixes,—prot-oxide, 1 *atom;* deut-oxide, 2 *atoms;* and peroxide, or 3 *atoms*.

PERCUSSION.—By this term is understood the art of examining internal organs by means of the sound elicited by striking the part over them with the fingers, or by means of striking on a plate of ivory or wood placed above the part. Percussion applied over any of the hollow structures of the body, the pericardium is subject to disease, particularly to inflammation and the accumulation of water. The first is called PERICARDITIS, or acute inflammation of the bag of the heart; a disease whose symptoms and treatment demand the closest attention and the most experienced skill to understand or conduct with success. The other disease is called HYDROPS PERICARDI, or HYDRO PERICARDIUM, or dropsy of the bag of the heart.

PERICARP.—The external covering of fruit and seeds.

PERICARPIUM. — Medicines formerly applied to the wrist (*carpus*) to cure agues.

PERICHONDRIUM.—An anatomical name for the synovial membrane over cartilages.

PERICRANIUM.—The periosteum of the skull; the fibrous membrane common to all bones in this situation, called *pericranium*.

PERINÆUM. — The space between the pubes and the fundament, so named from the medial line or seam that exists there. The space is bounded on either side by the bones of the *ischium*, or the *nates*. Small and circumscribed as this space is, its anatomy is of consequence to the surgeon, as through this, and close to the central seam, he has to make his inci-

muscles which move it. Insens
this membrane is when in a
health, when inflamed or diseased
rise to intense suffering.

PERIPNEUMONIA.—An in
tion of the substance of the lun
PNEUMONIA.

PERISTALTIC.—A worm-like
which is perpetually taking plac
bowels, and so called from its
action. This writhing, wriggling
begins at the duodenum, and is c
from one portion of the tube to ano
the whole canal is involved in thi
cular motion; as one portion falls
rises. This muscular contraction a
alimentary canal has the effect o
propelling forward the contents,
ing accumulation in any part,
suring in due time the expulsio
that is valueless to the system.
this action never ceases, it oft
below its healthy standard, and
torpid; hence the constipation t
ceeds such a diminution of the p
movement. The principle upon
aperient medicine acts on the b
that of a direct stimulant to the
coat of the intestines, exciting i
increased worm-like motion, whi
the acidity of the secretions thr
at the same time, produces the
understand by relaxation of the b

to explain intelligibly to his pupils, and the last that the student is able thoroughly to understand. Yet, as it is a very important structure, and a knowledge of its function and action explains many doubtful circumstances, we will, by a continuance of our homely simile, endeavour to give our readers an idea of what the peritoneum is like, and how it performs its duty.

We have just explained, under the heading of Peristaltic (which see), how the bowels are from birth till death constantly moving and gliding over each other, in a worm-like perpetual motion. It will be self-evident to every comprehension, that this day and night *friction* of such delicate textures as those composing the integuments, would, in the seventy years of man's life, wear out, or at least in time most seriously injure them. To prevent this friction, nature has provided the peritoneum, an immense shut bag, like a man's closed nightcap. The *inside*—that portion out of sight—presents, when cut open, a smooth, glairy surface, studded with innumerable vessels, always pouring out a thin, smooth fluid, like the liquid white of an egg, allowing the two sides, when rubbed together, to glide over each other, as if oiled, without check or the slightest friction. The *outside* of this peritoneal nightcap is rough and granulated, not unlike the uneven texture of the actual article. The peculiarity of the inner and outer sides of this immense bag lies in this, that the surface of the first is close, smooth, moist, and shiny, and, however firmly pressed, can never grow together, or keep long in contact; while that of the other is rough, dry, and *adheres* firmly to all with which it comes in contact. This external side, then, adheres to the muscles of the abdomen, and to every portion of the intestines, but in such a manner that between every convolution, or twist of the bowels, a fold of peritoneum accompanies it, so that between the bowel above or below there is always the two glairy sides rubbing against each other, and allowing the intestines to glide about without let or hindrance, the bowels being always on the *outside of the bag*, but always gliding over the *two inner sides*.

The peritoneum is a serous membrane, and, in the same way as it covers the bowels, lines and invests every organ in the abdominal and pelvic cavities. See BELLY, cut *of*.

PERITONITIS.—Inflammation of the peritoneum, one of the most rapid and serious of all the inflammatory diseases of the body.

SYMPTOMS. — These commence with pain at some particular spot of the abdomen, which soon, however, spreads over the whole surface, and in a few hours often becomes so acute that the weight of the bed-clothes aggravates the patient's suffering. The abdomen is everywhere hot, tender to the touch, and sometimes tense or tumid; the patient lies on his back, with his legs drawn closely up, and bent over the belly; the countenance is expressive of anxiety and anguish; the pulse is hard, small, and contracted, though sometimes soft and full; the bowels are confined; the water scanty and high-coloured; the tongue white and moist, but soon becomes dry and brown, with red edges; the breathing is short and difficult, particularly at the inspirations, the respiration seeming to be carried on by the ribs.

Peritonitis often runs its career in twenty-four hours, and when about to terminate fatally, the symptoms assume a typhoid character, with sudden loss of power, and an abrupt cessation of pain; the countenance becomes sharp, the nostrils pinched, a dark-coloured grumous fluid is ejected from the stomach, and the abdomen grows rapidly distended with wind.

The TREATMENT must begin with local and general bleeding, according to the age and strength of the patient, with the warm bath, and by adopting the antiphlogistic treatment. If the stomach is unaffected, the following mixture and pills are to be given as soon as possible after the preliminary measures.

Take of—

Tartar emetic . . .	4 grains.
Powdered nitre . . .	20 grains.
Mint water	6 ounces.
Laudanum	1½ drachms.

Mix: three tablespoonfuls to be given at once, and one every hour after.

Take of—

Calomel	24 grains.
Powdered opium . .	6 grains.

Extract of dandelion . enough to make into a mass. Mix well, and divide into six pills: one to be taken with the first dose of the mixture, and repeated every two hours. When the stomach is affected, and there is much sickness, the mixture must be suspended, and the pills given instead; at the same time the abdomen should be fomented, and the feet kept hot with bottles of water.

There is another form of this disease, occurring to women between the third and fifth day after confinement, called puerperal peritonitis, in which the symptoms commence with rigors; but with this exception, and that of severe pains in the head, and the drying up of all the secretions, the characteristics are nearly the same as in the former disease, while the treatment to be adopted is precisely similar, with such difference only as age, sex, or strength may justify. See WOMB, DISEASES OF.

PERIZOMA.—A surgical name for a Bandage, Girdle, or Truss, which see.

PERNIO.—Another name for chilblains, particularly those occurring on the feet.

PERONÆUS.—The name of a set of three muscles, situated in the leg, whose action is partly to flex and partly to extend the limb and toes. Their names are *peronæus longus*, *P. brevis*, and *P. tertius*; or the long, short, and third peronæan muscles.

PERRY.—This agreeable and favourite beverage, so much used in the West of England, is, like cider, made from a particularly hard, juicy fruit, a pear which, like the crab apples from which cider is made, is only fit for such a purpose. Perry is obtained by pressure and fermentation, exactly in the same manner that the other beverage is procured.

Perry, when well made, properly kept, and bottled, may be rendered equal to wine in its strength and sparkling qualities, while the ordinary article, used as a general beverage, makes a refreshing wholesome drink, less tart and more agreeable than cider.

PERSICUS IGNIS.—Persian fire; a severe kind of carbuncle, or a deep-seated boil.

PERSISTENS FEBRIS.—An intermittent fever, whose paroxysms return at regular periods or hours, without any variation.

PERSPIRATION.—This word, composed of *spiro*, to breathe, and *per*, by or through, is employed to express the system of glands and ducts by means of which the breathing function of the skin is carried on, and the perspiration of the body effected.

We have shown, under the head of Animal Heat, Lungs, and other subjects, the intimate connection there is between the functions of the skin and the lungs, and explained that whatever affects one of these organs is sure to influence the other. The air taken into the lungs at every inspiration converts the venous into arterial blood, animal heat being generated by the process, with the exhalation of carbonic acid from the system; while by every expiration from the skin the redundancy of water is thrown off from the blood, and the surface of the body rendered cool by the process.

The organization by which the important function of perspiration is carried on consists of nearly *three millions* of glands, each enclosed in a sac, and embedded in the base of the true skin, and by about *seven millions* of tubes or ducts, which, rising from the glands, terminate on the surface of the skin in what are called its pores. The purposes which the perspiration effects in the animal economy are threefold:—1st, it equalizes the function of the lungs; 2nd, it carries off the excess of water from the blood; and 3rd, it lowers by evaporation the heat of the skin, which it renders soft, smooth, and cool. Perspiration, like respiration, is a function perpetually taking place, both while awake and when sleeping, in action and in repose, though, like our breathing, it is increased by violent exercise. Perspiration not only carries off from the blood a large amount of water, but relieves the system of many hurtful or poisonous ingredients, which, if allowed to accumulate, would prove most injurious to the health of the body.

Perspiration is of two kinds,—that which is evident to the senses, and that of which we have no consciousness; or the Sensible and Insensible.

Insensible perspiration is a constant transmission, by day and night, of watery particles through the seven millions of pores which, from the head to the soles of the feet, are spread over the cuticular covering of the body, but which passes off so gently, that, if shown by the agency of a powerful microscope, it would appear to the eye like a vapoury mist, rising in diverging lines from every part of the body. By this steamy exhalation, or insensible perspiration, it is calculated that from TWENTY to THIRTY OUNCES of water are given off in every twenty-four hours.

Sensible perspiration is that moisture which exudes from the skin in evident drops of watery liquid whenever any exertion of the muscles or influence of the mind calls it forth. The amount of sensible perspiration lost in each day depends greatly on the temperament of the person, and the amount of exercise taken in the twenty-four hours; it is, however, seldom under sixteen ounces: the estimated amount of water thrown off from the blood daily, from each source, of sensible and insensible perspiration, being estimated at *forty ounces*, or between TWO and THREE PINTS, or pounds.

When, from inattention to cleanliness, or any other cause, the pores of the skin become blocked up, and perspiration is interrupted, an extra duty is thrown on the lungs, which have to compensate for the interrupted action of the skin in throwing off a larger proportion of moisture than is strictly compatible with their duty; hence, whatever affects the skin, exerts an influence on the lungs, and *vice versa*. This is the reason why cleanliness is so conducive to health, by keeping open the pores of the skin, and allowing an uninterrupted stream of insensible perspiration always to take place.

Large as the quantity of water given off every day from the body is, it is sometimes necessary, in the treatment of disease, to increase the amount by medicines having a direct operation on the glands and excretory ducts of the skin. When a mild action only is required, such as is effected by a gentle moisture over the body, a class of medicines known as *diaphoretics* are given; but when a profuse discharge is required, such as is called a thorough sweat, the agents known as *sudorifics* are employed. See SKIN.

PERTUSSIS.—The medical name for Hooping Cough, which see.

PERUVIAN BALSAM.—A resinous, semi-fluid exudation, from the *Myroxylon Peruiferum*, having an aromatic, balsamic odour, is of a somewhat analogous character to the balsam of tolu, and, like that article, used as an expectorant in coughs and bronchial affections.

PERUVIAN BARK.—Jesuits' or cinchona bark; one of the most valuable of ll our vegetable tonics. The tree which ields this well-known drug is a native f South America, growing, however, in reater perfection in Peru than in any of he other American states south of the sthmus. The bark is the only part of he tree used in medicine, and, till the iscovery of quinine, the powder of the ried bark was the universal form in which the drug was exhibited as a tonic nd febrifuge. The chief preparations of Peruvian bark are the simple and compound tinctures, the dose as a stomachic and tonic being from 1 to 2 drachms of either; the infusion, the dose of which is from half an ounce to an ounce; the powder, the dose being, as a tonic, from a scruple to half a drachm, and as a febrifuge, from 1 to 3 drachms; lastly, the extract, of which from 5 grains to half a scruple may be given twice a day. See BARK, and QUININE.

PES.—The foot.

PESSARY.—The name given to a set of surgical appliances, made of boxwood or Indian rubber, and of various shapes. Some are completely round, others oval or oblong, while some resemble flat discs, perforated in the centre; others, again, are shaped somewhat like a small pestle. The object for which the pessary is employed is to support the neck of the womb in the diseases known as *prolapsus* and *procidentia uteri*, the implement being passed up the vagina to support the organ, or answer the purpose of a plug. See WOMB, DISEASES OF.

PESTILENCE.—This word, derived from *pestis*, a plague, signifies any disease that becomes epidemic, and assumes malignant characters. Owing to our improved sanitary arrangements, the laws of quarantine, and the general spread of intelligence, those pestilential visitations that in former times so repeatedly desolated Europe, have become so rare as scarcely to be known. The advent of cholera, in 1830, was the last appearance in Europe of any visitation deserving the name of a pestilence or a plague. A disease arising from an infection of the air.

PETALS, in botany, are the coloured leaves which compose the flowers of all plants.

PETECHIA.—A medical term, applied to a dark, irreglar blotch on the skin, somewhat resembling the discolouration produced by a flea-bite, only larger. The term is generally used in the plural, and *petechiæ* are spoken of as an eruption indicative of a serious change taking place in fevers of a typhoid character, or in other diseases consequent on, or resulting from, great debility. *Petechiæ* may occur in many diseases, but are always indicative of a great prostration of strength, and must always be regarded as a serious symptom.

Petechiæ are caused by the giving way of some of the minute superficial veins of the skin, and the effusion of a few drops of blood beneath the epidermis, or scarf skin, producing the dark brown or purple discolourations, scattered in irregular spots over the surface of the body, the size of each petechia, and the number observable, indicating the amount of debility present. In scurvy, where the prostration of strength and the constitutional debility is the most complete, the petechiæ are large, irregular, and deep-coloured.

PETROLEUM, OR BARBADOES TAR.—A thick, dark-coloured, unctuous, and highly inflammable semi-fluid substance, found abundantly in nature in all the tropical regions of the earth, either exuding from the crevices of rocks, or percolating through the soil, and collecting in ponds or small lakes in some convenient hollow of the land.

Petroleum, or impure naphtha, is commonly called Barbadoes tar, from the quantity of it found in that island, but is only used in medicine when a strong sweating action is required on the skin, as in catarrh, or some obstinate cold, when it is given in half-drachm doses as a sudorific, much in the manner, and with the same intention, as spruce-beer. See BARBADOES TAR, &c.

PEYER'S GLANDS.—Small glands, diffused in clusters over the intestines, and so named after Dr. Peyer, their discoverer. These *follicles*, or clustering glands, are situated directly under the villous coat of the whole alimentary canal.

PHACIA.—A peculiar discolouration of the skin of the face and hands, caused by exposure to sun and weather: another name for freckles. See SKIN, DISEASES OF.

PHAGEDENIC.—A term used in surgery to express a spreading and destructive ulcer, which rapidly involves and destroys all the surrounding tissues. Any eating away or malignant sore, as cancer or canker.

PHALANX.—A term used, anatomically, to express a row of bones, like the rank of a troop of soldiers. Thus all the bones of the fingers and toes, because so placed, are called *phalanges*, the plural of phalanx.

PHARMACOPŒIA.—The standard book and authority of pharmacy, containing directions for preparing all the articles used in the practice of medicine, as sanctioned by the three great colleges of London, Edinburgh, and Dublin. Most Pharmacopœias are preceded by a Materia Medica, a work embracing the history of every drug or agent of the three kingdoms used in practice.

PHARMACY.—The art of compounding the various preparations in the Pharmacopœia, with all the information appertaining to the education of a druggist and chemist. The medical student's education should always commence with the practical study of pharmacy, as on his thorough knowledge of this branch of his profession much of the confidence and success of his future career will depend.

Pharmacy, chemistry, and materia medica are the first and most important branches of medical education, and should be always studied and prosecuted at the same time.

PHARYNGOTOMY.—The operation of cutting into the bag of the pharynx, to remove any substance that, having passed the tongue, is too large to enter the gullet, and by its size, or pressure on the *larynx*, or organ of voice, would endanger life by pressing on the air-tube (the windpipe), if not quickly removed by an operation.

PHARYNX.—A muscular bag, somewhat resembling a funnel in shape, situated at the back of the mouth and upper part of the throat; the conical space above being the pharynx proper, and its tube-like continuation below the *œsophagus*, or gullet; the pharynx being the receptacle for the masticated food from the mouth, and the œsophagus the channel through which it is conveyed to the stomach. The pharynx consists of three sets of muscles, named after their connections or situations, as the *pharyngæus*, *glosso pharyngæus*, &c. See DIGESTION, *cut of*.

PHYMOSIS.—A constriction of the extremity of the prepuce, so close and firm as to prevent its being drawn back. In such a case, an operation alone can remedy the evil. See PARAPHYMOSIS.

PHLEBITIS.—Inflammation of a vein, a very serious but fortunately a rare disease. Inflammation of a vein—for in general it is only one vessel that is affected—is caused by some accident to the part, a severe bruise, laceration, puncture with rusty nails, or the absorption of some poisonous matter during dissection, or at a *post mortem* examination; another and by no means unfrequent cause of phlebitis, is bleeding with a dirty lancet—one on which some vaccine lymph or virus from a foul abscess has been allowed to dry, and the lancet, without being washed, used in bleeding some person prone to rapid absorption.

The *symptoms* of phlebitis are great heat, thirst, rigors, excessive pain along the course of the vessel, which is usually defined by a red or purple line marking the whole progress of the vein. If in the arm, the whole limb becomes tumid or severely swollen, hot, red, and acutely painful. All inflammations of the veins run their career in a very short time, are particularly liable to pass into suppuration, and induce typhoid symptoms. On this account, the *treatment* must be prompt and energetic, and the bleeding and antiphlogistic measures to be adopted employed at once, and before the debility consequent on the disease sets in. Calomel and opium, or calomel and kino, are the remedies usually given in this disease, so as to affect the system as quickly as possible with wine, quinine, and opium, and a nourishing diet, when the typhoid symptoms set in. In other respects, the means adopted in inflammatory and typhus fever are to be employed, according to the symptoms which present themselves.

PHLEBOTOMY.—The operation of bleeding, commonly called by medical men *venesection*, or the cutting of a vein. See BLEEDING.

PHLEGM.—Among the ancient physicians this was regarded as one of the four primary humours of the body.

Phlegm is a viscid mucus, expectorated from the throat and fauces in colds and bronchial affections. Scientifically, the word phlegm is used in the sense of nervous and sanguineous, to express a peculiar temperament or condition of the body, a *phlegmatic* or *phlegmatical temperament* being regarded as a cold, dull, apathetic state of mind and body. See TEMPERAMENT.

PHLEGMAGOGUES.—Medicines given to discharge troublesome phlegm—another name for expectorants.

PHLEGMASIA DOLES.—A painful phlegmonous inflammation occurring in the lower extremity. A disease commonly known as the "swollen leg," and to which females are very subject in childbed, between the first and third, or third and fifth day after confinement. A disease of the lymphatic vessels of the leg, caused by pressure during labour. See LEG.

PHLEGMON.—A hot, painful tumour or swelling; a name given by surgeons to what is professionally called an acute, healthy inflammation. From this word is derived the term phlegmonous inflammation.

PHLOGISTON.—By the old writers, this imaginary substance was regarded as the basis of all fire, and the principle of combustion.

PHOSGENE GAS.—A chemical compound of charcoal, in the state of protoxide and chlorine gas.

PHOSPHATES.—Chemical salts, composed of minerals, alkalies, or earthy matters, as a base, and phosphoric acid. The most important of the phosphates are the phosphate of lime, the universal basis of all bone and horn (the *cornu ustum* of the old Pharmacopœia, or burnt horns); phosphate of soda (tasteless salts); and the phosphates of potass and barytes. Some of these salts are found in the urine, and also in the urinary calculi. Phosphate of lime, or burnt horns, is used in the preparation of the *pulvis antimonialis*, or James's powder; and when combined with carbonate of soda, yields the saline purgative known as tasteless salts.

PHOSPHORUS.—A highly inflammable substance, of a light brown colour, soft as beeswax, and usually prepared in sticks a few inches in length, and of a thickness varying from the diameter of a pen to that of the little finger. Phosphorus is never found in a native state, but is made by different artificial processes, and is in general prepared from bones, though formerly produced from urine. It is so inflammable, that the slightest pressure causes it to burst into flame; it takes fire even if exposed to the air, at any temperature: on this account it requires to be always kept under water, well secured, and preserved in a dark place. Phosphorus burns with a slow combustion, with a volume of white vapour, diffusing a strong, disagreeable odour, and emitting in the dark a bright, shining light; it is insoluble in water, dissolves in sweet oil by heat, and is entirely soluble in ether and oil of amber; it is a powerful irritant poison, and is sometimes—but rarely—used in medicine, its one action on the system being that of a powerful stimulant. So diffusible and potent is this effect, that it has been employed in paralysis, rheumatism, and cases of extreme prostration: the great risk attending its use will, however, materially interfere with its employment in practice, while for the same reason, no non-professional person should ever prescribe or take it as a medicine.

Phosphorus is found in all decaying animal and vegetable matters, forms one of the most important principles in the growth of all vegetables, and is a necessary ingredient in the framework of man, and also of the aliment on which he lives.

See Food. It is on this account that bone-dust, and the phosphates of soda and lime, are so highly prized by agriculturists as the best of all artificial manures, and particularly for what are termed the straw crops,—wheat, barley, rye, and oats.

The mode of prescribing phosphorus as a stimulant, when employed in the last stage of consumption, in that of typhus, and in palsy, is to dissolve 2 or 5 grains of phosphorus in 1 or 2 ounces of ether, with 2 or 3 drops of the oil of cloves or peppermint, and giving it in doses of from 5 to 10 drops at a time, in a spoonful of brandy and water; the amount given being so calculated that about one-fifteenth part of a grain of phosphorus shall be contained in each dose of drops, the number increasing till they represent one-tenth of a grain.

A warm, stimulating embrocation is sometimes made, to rub paralytic limbs, composed of phosphorus and camphor dissolved in olive oil, to which hartshorn and oil of amber are subsequently added. Care must be taken, however, that the hand used to rub in so potent a liniment is well protected by a padded glove. Though so necessary an ingredient in our daily food, phosphorus, when inhaled into the lungs, acts as a malignant poison on certain parts of the body, particularly on the face, where it induces a kind of eating cancer, that destroys all the structures down to the bone, so completely that the dead and blackened scales of the jaw or cheek bone are forced out through the ulcerations of the flesh, exactly as in *Necrosis*, which see. The children and adults employed from day to day in the manufacture of lucifer matches (one of the most extensive uses to which this dangerous substance is put), are those who suffer most from this cruel disease.

The late discovery of the *amorphous phosphorus* has fortunately taught us how to deprive this mischievous substance of all its dangerous properties, and that too without injuring its real virtues: the amorphous, or dry phosphorus, emits no odour, will neither take fire when exposed to the air, or when rubbed; and even if put to the mouth—as children sometimes do with matches—is harmless. This effect is produced by keeping the phosphorus at an intense heat for several hours. Phosphorus, when applied to the skin or touched with the fingers, destroys the cuticle as if burnt with a heated iron; its effect on the mouth and stomach is equally corrosive, acting as a swift and agonizing poison. See Poisons. The preparations of phosphorus are,—Phosphoric acid, a compound of phosphorus and oxygen; Phosphates, salts already described, composed of phosphoric acid, and alkaline or earthy bases, and the Phosphurets, compounded of phosphorus and metallic oxides.

PHOTOMETER.—A scientific instrument of great delicacy for measuring the intensities of light.

PHRENITIS.—Inflammation of the brain or its membranes. The term was formerly applied to inflammation of the diaphragm or midriff, when that organ was supposed to be the seat of the immortal principle. See Inflammation of the Brain.

PHRENOLOGY.—A history of the mind; a description of the human brain as respects its development, functions, and properties; the science of a system of mental philosophy, as designed and taught by Drs. Gall and Spurzheim on the Continent, and by Dr. Combe in England. By the theory advanced by its discoverers, phrenology, instead of being an obscure or doubtful science, is said to be a luminous, unmistakeable, and infallible study, by which, when having once mastered the first rudiments of the new doctrine, the whole human brain, like an elevated chart, with its islands, continents, peninsulas, and promontories, lies before the student's observation, revealing, in the definite marks of its elevations or asperities, the secrets of the whole internal man: all the virtues, passions, and all the vices of the inward nature, becoming as legible to the comprehension of the phrenologist as the features of the face or the letters in a book. The brain in phrenology is divided into three regions or parts,—the anterior, middle, and posterior: in the anterior or front portion are situated the intellectual or perceptive faculties; the moral sentiments or emotions are congregated in the middle region; and the animal propensities confined to the posterior part, or the back of the head. Each of these portions is divided into a certain number of separate and distinct parts or organs, each organ or part having a special and distinctive function assigned to it. The inequalities of the brain, when confined in its bony case, the skull, are said to produce corresponding elevations, depressions, or irregularities, on the bony covering without, by examining which, the phrenologist is enabled to read off the mental character of an individual as rapidly and certainly as if the delicate organ within was uncovered to his view.

The following are a few of the most important principles of phrenology:—

"Man is mind, the body is merely the instrument through which the mind manifests itself; mind is the primal power of the human system; the mind is manifested through about FORTY ORGANS, each primary and independent in its functions, doing its own work, and not doing that of any other. The power of each organ resides in, and is exercised through, a particular and distinct part of the brain. Each mental power grows stronger and becomes more skilful by exercise; the functions of the several organs are governed by special laws. Phrenology is the science which explains these laws. The state of the body affects the action of the mind. There are three temperaments or conditions of the body when in health, called the *vital*, *motive*, and *mental*.

"The VITAL temperament is characterised by large lungs, a vigorous circulation, a powerful appetite, a well-developed body, and by an abundance of blood and animal spirits. The vital temperament is made up of the old sanguineous and lymphatic temperaments.

"The MOTIVE temperament—formerly alled the bilious—is indicated by bold, arsh lines, a bony system, a good deve-pment of hard muscle, rough, prominent atures, dark eyes, dark, wiry hair, and a rk complexion, with disinclination to pose, and restlessness or constant action.

"The MENTAL temperament—formerly e nervous. This condition depends upon e harmony of brain and nervous system, ad is characterized by mental activity, y the smallness and delicacy of the uscles and texture of the skin, which is in and soft; by a light, elastic frame, ne hair, delicate features, and a brain rge in proportion to the body.

"The vital temperament produces rdour and impulsiveness of mind, a ndency to enjoyment, social affection, armth of temper, and a desire for active, ractical business.

"The motive temperament is the parent f dignity, a stern and resolute will, am-ition, a love of governing, strength of hought, and an unflinching resolution nd persistency of purpose.

"The mental temperament imparts, ith a delicacy of body, a delicacy of ind, great susceptibility, a disposition to hink, to study, and cultivate art, or some legant pursuit."

The practical uses of phrenology are,—

1st. To teach us how to bring all parts of the system into harmonious action.

2nd. To understand the functions and uses of every mental organ.

3rd. To enable us to govern and educate every faculty and propensity, increasing the power of some, and directing others.

4th. To enable us to know ourselves, and to account for each thought, motive, and act, on true scientific principles.

Phrenologists divide the mental organs, in their symbolical heads, into *five* groups, distinguished by different colours, each of the forty organs being locally indicated by a figure, or a pictorial symbol.

Phrenological organs *coloured black*.—Sexual love, love of offspring, love of country, attachment, propensity to quarrel, propensity to destroy, cunning, desire of acquisition, constructiveness.

Phrenological organs *coloured blue*.—Caution, love of praise, pride.

Phrenological organs *coloured yellow*.—Benevolence, veneration, firmness, love of justice, hope, wonder, imagination, wit, imitation.

Phrenological organs *coloured green*.—Talent for detail, form, size, weight, colour, place, numbers, order, eventuality, time, music, language.

Phrenological organs *coloured red*.—Comparison, metaphysics.

As the names given by phrenologists to the several organs are in many respects different from those just recorded, we shall, in concluding the present subject, arrange the names according to the latest and most approved fashion:—1, amativeness; 2, conjugal love; A, parental love: 3, friendship; 4, inhabitiveness; 5, continuity; E, vitativeness: 6, combativeness; 7, destructiveness; 8, alimentiveness; 9, acquisitiveness; 10, secretiveness; 11, cautiousness; 12, approbativeness; 13, self-esteem; 14, firmness, or obstinacy; 15, conscientiousness; 16, hope; 17, spirituality; 18, veneration; 19, benevolence; 20, constructiveness; 21, ideality; B, sublimity: 22, imitation; 23, mirth; 24, individuality; 25, form; 26, size; 27, weight; 28, colour; 29, order; 30, calculation; 31, locality; 32, eventuality; 33, time; 34, tune; 35, language; 36, causality; 37, comparison: C, human nature, and D, suavity.

Whether phrenology will ever become more than an interesting and amusing scientific recreation, is yet to be discovered; at present, standing alone, and apart from animal magnetism, or electrothe lower extremities, and standing in wet shoes, or with damp feet.

The SYMPTOMS generally commence with an itching sensation about the margin of the *anus;* an uneasy sense of weight is soon after felt in the part, which increases to a dragging, bearing down tension, accompanied with heat, which soon becomes of a pungent, burning character, with pains in the back or loins; pains in the head, too, are by no means unfrequent, sometimes attended with *vertigo,* or giddiness; there is a frequent and unprofitable desire to empty either the bladder or the bowels, in which latter case the pain, heat, and bearing down are all greatly augmented. If the fundament is now examined, small knotty tumours will be found on the verge of the bowel, or else a number of varicose veins, or there may be only one protuberance discovered, just within, or *on,* the sphincter muscle, causing, by its situation, acute distress, as that muscle cannot be closed, thereby keeping up a state of constant TRISMUS, which see. Sometimes there is only heat, itching, and pain existing at the *anus,* and no appearance whatever of piles or distension. In such cases, the hæmorrhoids are situated some inches up the *rectum,* quite out of sight or ordinary reach; when such is the case, the pain in the back is always more lasting and weary. Piles may break at any time, though they most frequently do so in some attempt to open the bowels. When the piles are evident to the sight or the touch they are usually about the size of a bean, though occasionally much larger. Sometimes, in relaxed constitutions, a portion of the coat of the bowel, with a part of the vein, hangs down, and being forced beyond the anus during some action of the bowels, becomes excessively distended, when, to the intense relief of the patient, but sometimes to his danger also, the thin coat of the vessel bursts, and a considerable amount of blood is instantly discharged.

The TREATMENT in this disease demands a considerable amount of prudence and deliberation. In the first instance, care must be taken not to check the bleeding too abruptly, or before it has been discovered whether nature is attempting, by this outlet, to carry off some weight from the system, or is making an effort to re-establish some suspended drain to which the body had become accustomed. The most important fact for the consideration of the person habitually or occasionally afflicted with piles, *is not to allow his bowels to become confined,* but, by constant attention, keep them always, not exactly relaxed, but open; and as the best and least objectionable of all aperient medicines will, in time, if often repeated, either lose their efficacy, or become, in a measure, hurtful, he should endeavour so to educate his bowels, by *custom and diet,* or by other means, that they shall operate spontaneously, at least once a day. Foremost among such natural means to insure a daily action of the bowels is *punctuality,* and *regularity in the time selected for that purpose.* Whether early in the morning, late at night, or midday is the time set apart is perfectly immaterial, so that day after day, at the same hour, the solicitation is made; if so, the repetition is certain, in time, to bring with it success. Where the constitution is naturally costive, something more even than this punctuality may be necessary to obtain the relaxed evacuations so requisite in a case of piles. This, however, may be effected by a total alteration in the diet for one or two days; by substituting bread and milk for the ordinary breakfast; boiled spinach, and a poached egg, and tapioca pudding for dinner; bread and milk for tea; and toast and gruel for supper; or taking a basinful of Revalenta Arabica for the bread and milk at breakfast and tea, or for the gruel at supper. A complete change, such as this, will generally be found to act as an agreeable aperient for the bowels, while it directly benefits the constitution. Another means to the same end is exercise by rapid walking, bathing the hips and lower part of the abdomen with a sponge and cold vinegar and water, and using a rough towel, or the flesh-brush, afterwards, every morning, and by drinking a tumblerful of cold water on getting into bed every night. We have given these suggestions as links in a system which, if carried out, will be certain to cause the bowels to act spontaneously, without resorting to medicine. It must not, however, be forgotten that the practice just recommended forms *part and parcel* of the treatment in all severe cases of piles, particularly where there is frequent or severe bleeding. As piles are generally attended or preceded by a sluggish liver, and venous congestion in the abdomen, a compound blue pill and a rhubarb draught should be given early in the case, as a means of removing one of the exciting causes; this should be followed up by a castor oil mixture, and, where the heat and pain in the fundament are severe, a suppository should be inserted either before going to bed or early in the morning. The following are the prescriptions referred to:—

Pills.—Take of—

Pill Rufi (aloes and myrrh)	1 scruple.
Blue pill	2 scruples.

Mix, and divide into ten pills: one to be taken at bedtime, followed the next morning by the—

Rhubarb Draught.—Take of—

Powdered rhubarb . .	15 grains.
Ginger, powdered . .	5 grains.
Carbonate of soda . .	10 grains.
Peppermint water . .	1½ ounce.

Mix, and make a draught.

Mixture.—Take of—

Thick mucilage . . .	1½ ounce.
Castor oil	2 ounces.

Mix till thoroughly incorporated, and then add—

Simple syrup	1 ounce.
Tincture of benzoin .	1 drachm.
Water	sufficient to

make an eight-ounce mixture: two tablespoonfuls to be given every six hours.

Suppository.—Take of—

Soft opium	4 grains.

Make into a small cylinder, and, having slightly greased, pass it up the fundament within the sphincter muscle. When the symptoms are taken in time, the occasional use of one of the above pills—every other night, or twice a week,—with a dose of the castor oil mixture once or twice a day, will, in many cases, with or without the rhubarb draught, be sufficient to remove all cause of pressure from the veins of the abdomen, and effectually subdue all uneasiness. In cases of hemorrhage, however, and especially if severe, and *when* it is proper to check the bleeding immediately, the cold hip bath should be employed as soon as possible, followed hortly by the application of ice or cold ugar of lead lotions to the *anus* and *erinæum*; and should this not speedily ubdue the discharge, a piece of lint, well aked in the extract of lead, and smeared ith lard, is to be passed up the fundaent, if the bleeding vessel or pile should e within the sphincter; and retained there ll the hemorrhage has been subdued. hould the bleeding still continue, other stringents or pressure must be applied y passing pledgets or rolls of lint up the anus, moistened with the extract of lead, or otions of alum and zinc, or the compound all ointment, the whole being supported y a T bandage. The internal remedies in such cases vary considerably. Some recommend the confection of senna (lenitive electuary), in doses of a dessertspoonful every six hours; some practitioners have greater faith in Ward's Paste,—a stimulating confection, made with spices, balsams, and sulphur, given in small quantities every four hours. Another preparation, of much the same character—the confection of long pepper,—is also given for the same purpose. A very useful electuary is prepared by mixing jalap and cream of tartar, of each 1 drachm; ginger, 1 drachm; sulphur, 1 ounce; and a little syrup, with 2 ounces of confection of senna; of which a teaspoonful is to be given three times a day. Sulphur seems to exercise a peculiar, and almost a specific, effect upon this disease, making it one of the best, if not the best, remedy that can be employed in cases of hæmorrhoids, not only from its abating the pain, but because it, at the same time, subdues the irritation consequent on the disease. Half a teaspoonful of sublimed sulphur, or a teaspoonful of the milk of sulphur, taken in milk every night on going to bed, will be found to act as a gentle aperient, while, as already stated, the pain and irritation will be abated by the same means. The application of two or four leeches to the *perinæum*, when the inflammation of the part is severe, will, if applied at the same time that the sulphur is taken internally, exercise a most beneficial effect on the disease.

Some persons are in the habit of sitting for a length of time on vessels filled with hot water, to obtain relief from the smarting pain caused by the presence of piles. This plan, however, is attended with little permanent benefit apart from the temporary good afforded by the soothing properties of the warm moisture. The cold hip-bath, or lotions to the part, with an opium suppository, forms the best and most rational treatment, relieving both the pain and inflammation at one and the same time, and in all cases will afford aid, while the medicines prescribed when the piles are, and when they are not, bleeding, if employed at the same timè with the external applications, will in all cases, if properly persevered in, effect benefit or a cure.

The remedies beneficial in one constitution are less serviceable in another; hence the several forms of medicines mentioned for bleeding piles, the patient having the option, should the first not prove successful, of adopting another, when stimulants are necessary.

There are several kinds of small tumours, warts, and other excrescences, which, in persons of weak or relaxed constitutions, form round the margin of the *anus*, or on the circle of the contracting muscle, and, though seldom bleeding, cause nearly as much discomfort and pain as piles themselves. These are generally removed by tying a piece of thread round their base, so as to strangulate them, when, after a day or two, they are certain to slough and fall off. The root is then to be touched with caustic, a cold astringent lotion applied to reduce the inflammation, and the source of vexation will be found to have disappeared. In all cases of pain and irritation at the fundament, from whatever cause, a suppository of 3 or 4 grains of opium, and a lotion such as the following, cannot fail to afford relief, if not a speedy cure. Take of—

Extract of lead . . .	2 drachms.
Camphor water . . .	8 ounces.

Mix, and make a lotion; to be used cold three times a day.

PILLS.—One of the commonest and most convenient forms in which medical men prescribe or administer their remedial agents. Though by no means a good vehicle for the exhibition of remedies, the pill possesses some advantages for which both doctor and patient are willing to overlook its other objections. The pill presents us with a form of medicine in which powerful and very disagreeable drugs, in regard to taste and smell, can be taken in a small bulk, and in a form in which it is impossible to taste the disagreeable flavour of the ingredients. Against this advantage, however, there is the drawback of pills becoming hard by keeping, and lying many hours in the stomach before they become dissolved, or are capable of effecting the action for which they were probably prescribed. In all cases this is an objection, and in dangerous or urgent diseases, where an immediate effect is desired, it becomes a very serious obstacle to their use. The ordinary kinds of aperient and pectoral pills kept in the shops are made in such quantities, and often kept so long before being sold, that the patient might as well, in many instances, swallow three or four white peas, or as many shot, and anticipate an action from them, as waste his time by waiting for their hoped-for operation. Pills are generally made of articles first reduced to a perfect powder, each ingredient, as it is weighed, being put in a dry wedgwood mortar; when all the articles have been added, they are to be intimately mixed with the pestle till they are thoroughly incorporated; then, but not till then, the substance should be added that is to incorporate the mixture into a soft mass. Some persons use gum-water or mucilage for this purpose; but unless when making a very few pills for immediate use, this article should be avoided, for what with the gum contained in many of the drugs, and that added in the mucilage, the pills so made become in a few days excessively dry and hard, and after a time rendered, for all hope of immediate utility, perfectly valueless. The article best adapted for the purpose is soap,—not the hard Castile, but thin scrapings of the best yellow soap; this, worked up in the pills, keeps them longer soft than any other substance, and being easily dissolved, renders them quickly acted on by the stomach: after soap, the next best articles are glycerine, sweet oil, and lastly, treacle.

Whatever is employed for the purpose must be added by degrees to the collection in the mortar, working it into the ingredients till they become moist, and assume the form of a piece of stiff earth or clay; it is then to be removed from the wedgwood, and placed in an iron mortar, where it is to be well beaten for some time, adding from time to time a little sweet oil, till the mass becomes soft, tenacious, and of the consistency of dough, and will bear to be drawn out in the hands without breaking short; to effect this desirable point, the mass is to be worked about for several minutes in the hands till it can be drawn out into any length, a sign that it has been perfectly incorporated, and is satisfactorily made. This mass is then to be dusted with magnesia, to prevent it sticking, cut into small pieces, and weighed into little round lumps of 2 drachms each; the pieces are then put on the pill machine, rolled out into lengths about the shape and circumference of a penholder, when each one is placed on the brass teeth of the machine, and by the pressure and motion of the reverse side of the roller, cut into twenty-four round and equal sized pills, each weighing exactly 5 grains. Some machines are only made to cut twelve pills, in which case, to insure the same sized pills, the masses to be rolled must only weigh 1 drachm. To prevent the pills from sticking together, a quantity of magnesia is sprinkled over them before being put away in pots or bottles: instead of magnesia, some chemists use powdered liquorice root, which being sweet, is thought to cover any bitter taste imparted to the palate while swallowing. The only effectual way in which that objection can be overcome is by gilding the pills, either with silver or gold leaf. The mode of gilding pills is to dip the thumb and fingers slightly in very thick gum, roll the pills about quickly till they are entirely covered, dropping them one by one into a lozenge box in which several cut sheets of metal have been placed, and then shaking them about till each has become completely coated with the silver or gold; when dry, the refuse metal is to be blown away, and the pills put in a clean box. Pills are made of different strengths and of different sizes, and though *five* grains is the standard weight, they are sometimes made of *four*, and even of *three* grains. Some persons have a great repugnance to pills, and often declare, as an excuse for not taking them, that their throat is so very narrow that no pill of the ordinary size will pass it. This is a great fallacy; it is the *fear* to swallow, not the incapacity of the gullet to pass an article ten times smaller than the smallest mouthful of masticated food taken at every meal. It is, in fact, the smallness of the pill which makes the difficulty of swallowing it; for unless the head is held far enough back to insure its dropping at once into the tube, its minute size prevents the muscular fibres of the gullet grasping it, and forcing it downwards. All that is necessary to be observed in taking a pill is, to place it in the middle of the tongue, take a sip of tea or water, and throw the head suddenly up till the face is on a line with the ceiling, when nothing but nervous fear can prevent its being swept by the liquid into the narrow part of the gullet, from whence the muscular coat of the tube will drive it into the stomach. The best time for taking pills is at night, for then the stomach has leisure to dissolve them completely, a cup of hot tea in the morning causing them to act at once and effectually. The Pharmacopœia contains forms of pills of all kinds,—purgative, cathartic, diuretic, diaphoretic, expectorant, and sedative. The pills most frequently used are the compound colocynth, rhubarb, and assafœtida, pill rufi, aloes and myrrh, squill pills, Plummer's pill, and blue pill.

PIMENTO.—Allspice, or Jamaica Pepper, which see.

PIMPERNEL.—A well-known plant, formerly considered invaluable in all nervous diseases, particularly in falling sickness (epilepsy), the cold palsy of old age, and as an excellent remedy against the bite of a mad dog and all venomous reptiles.

Like the sunflower, the pimpernel has always been regarded by our peasantry with special regard, and from the fact of its petals folding up at midday, and on the approach of wet weather, it has obtained from the country people the name of the "poor man's weather-glass," and from the old botanists that of the "shepherd's barometer."

PIMPLE.—A small, red, and painful elevation on the cuticle in a state of tardy suppuration. Though pimples may occur on all parts of the body, it is on the face where they are most universally met with, and where they generally arise from some disordered state of the digestive organs: when large, with broad, angry bases, they indicate a diseased condition of the liver. When very minute, and clustered in circular discs or irregular patches, they constitute those cutaneous affections known as tetter, herpes, &c. See SKIN, DISEASES OF.

PINEAL GLAND.—The name of a small gland about the size of a pea, situated near the centre of the brain, and regarded by the old physiologists as the seat of the *soul.*

PINE APPLE.—This delicious fruit, once the exclusive privilege of the great and the wealthy, but now in the season common to all classes, is sometimes used in its unripe state as an anthelmintic, to destroy worms, and as a diuretic.

PINE WOOD.—This species of fir is chiefly of note from the quantity of rosin and turpentine obtained from both its tree and wood. See PINUS.

PINIC ACID.—An acid principle extracted from turpentine.

PINS AND NEEDLES.—These most useful implements sometimes become objects of danger to children, who, imitating the bad example of their nurses, too often put the first in their mouths, and in a moment of forgetfulness, swallow one or more; or by sticking the latter carelessly in their clothes, the needles work into the flesh, and without producing much pain at the time, eventually travel half over the body. When a pin has been swallowed, the best plan is to give small doses of castor oil daily for a few times, examining the evacuations to see if it has passed; should it not have done so, a dessert-spoonful of vinegar should be given occasionally, to enable the gastric juice to act upon the metal, which it will certainly soon do, and in time entirely dissolve the pin. When a needle is in the body, and comes to the surface, it generally shows a dark blue line or dot above the place where it lies; in such a case, the cuticle should be divided, and the needle grasped by a pair of small forceps, and pulled out.

PINS AND NEEDLES.—A popular phrase applied to that pricking and numbness felt in the leg and foot, or hand and arm, when, after a long pressure, the benumbed part is recovering its nervous vitality. Such sensations are also premonitory symptoms of palsy, or loss of power in a limb. See PALSY.

PINT.—A liquid measure of twenty ounces, half of a quart, and the eighth part of a gallon. *Octarius* is the medical name for a pint, and the symbol that indicates it, when written or abbreviated—O.

PINUS.—The pine: a family of plants yielding the fir, the Scotch, Norway, and silver, the larch, and several other varieties; the products of all the family are turpentine, rosin, pitch and tar, while some yield special resins and balsams, both liquid and concrete, such as Burgundy pitch, Canada balsam, and Venice turpentine.

PIPER.—The Latin name for Pepper generally, which see.

PISIFORM, or pea-shaped; the name given by anatomists to a small bone in the first row of the bones of the wrist, or *carpus*.

PISTACHIO NUT.—A foreign fruit, held in great esteem in Syria and the East, both as an article of diet and prepared as a confection. Like most nuts, it contains a sweet, bland oil, on which its best properties depend.

PITCH-PLASTERS. — The articles sold or prepared under this name are made with common rosin and yellow wax, or of Burgundy pitch, and blister plaster. See PLASTER.

PITUITA.—The thick mucus discharged from the nostrils. That portion of the membrane of the mouth which lines the nostrils, in consequence of the different character it assumes, and the nature of its secretion, is called the pituitary membrane; and from the German anatomist who first minutely inspected it, is sometimes named the Schneiderian membrane. A small elevation, situated at the extremity of the infundibulum in the brain, is known as the pituitary gland, *and was* at one time thought to be the secreting organ of all the pituita discharged from the nose.

PITYRIASIS.—The professional name for dandriff. See SKIN, DISEASES OF.

PLACEBO.—Something to please or amuse. A placebo is a pleasant, harmless mixture, a pill or a powder prescribed more for the purpose of satisfying the patient's mind than doing any good to his constitution. In some cases of hypochondriasis, where medicine of an active nature is unnecessary or uncalled for, it is customary to prescribe *placebos*, or harmless preparations, the patient all the time believing he is taking specific remedies.

PLACENTA. — The after-birth: the professional name given to the membranous mass thrown out after impregnation by the uterus, and by and through which the circulation is carried on between mother and child by means of the *funis*, or navel string. The placenta is so named from its flat or cake-like shape. See WOMB.

PLAGUE, THE (*Pestis*).—This malignant disease, a fever of the typhoid type, one so fatal in Europe, and particularly in this country two centuries ago, has now, owing to the improved dwellings of the poor, better ventilation, and the establishment of sanitary regulations, long and it is to be hoped for ever, disappeared.

Though Europe has been happily long exempt from this dreadful visitation, it is still to be found in all its virulence on the shores of the Levant, and some of the islands of the Mediterranean, and in Egypt it may be regarded as always in a state of chronic existence.

The SYMPTOMS of this disease commence with the common characteristics of fever, only more intense, accompanied with an acute pain in the region of the heart; the countenance is expressive of anxiety and exhaustion, the eyes dull and heavy, the lids half closed, and the mouth open. The gait is staggering and uncertain, the head falls on the chest, and the debility becomes extreme. The complexion is dark, the eyes sunken, the tongue dark and swollen, and there is vomiting of bile. These symptoms, all rapid in their career, are followed by darting pains under the arms in women, and through the groin in men; the precursors of those glandular swellings which soon after occur in those places. These tumours, bubos, or carbuncles, as they are differently called, are the characteristic signs of this disease, and it is fortunate for the patient hen they suppurate easily, and are of a right red colour, and a bad sign when hey are dark and livid.

The first stage lasts about twelve hours, nd is succeeded by reaction with coma, stlessness, delirium, and a peculiar rightness of the eyes. The pulse, at first uick and feeble, from 115 to 130, in the econd stage becomes hard and full, and the same time irregular. The lips, eth, nostrils, and mouth are loaded with thick, dry *sordes;* there is constant usea, or vomiting of black bile; the owels are sometimes relaxed, and their ntents black, grumous, and offensive. n favourable cases, a profuse perspiration arks the crisis of the disease; in un-vourable cases, the skin remains harsh d dry, the bubos continue stationary, d the skin is covered with *petechiæ.* n the most favourable cases the bubos rm early, are firm, but moveable, and ss rapidly into suppuration.

It is unnecessary to say more as regards e TREATMENT, than that it is nearly e same as that for typhus fever, with mentations to the swellings. Those ho live over the eighth day usually cover.

PLANTAIN.—This plant, though a tive of India, is now cultivated to a rge extent in America and Africa, where is greatly prized on account of the luable property of the fruit, the scraped-at pith being used as bread.

Another variety of the plantain, called e *plantago major*, is used in this country a popular remedy for old sores and ill-nditioned ulcers, the part being dressed ith the leaves beaten into a pulp or laid oadly over the sore, leaf upon leaf. An ntment is sometimes made of the leaves, hich is esteemed as equally efficacious in res and ulcerations.

PLANTARIS.—The name of a muscle f the leg, whose use is to extend the foot, so a portion of the sole of the foot.

PLANUM OS.—The orbital process, or ate of the ethmoid bone.

PLASTER.—A medical preparation ed for external applications, and composed in general of oil, wax, rosin or resins, d powdered substances. Plasters are nerally made in rolls, for the greater faci-ty of melting with the heated spatula hen required for spreading. The most portant of all the plasters is the lead diachylon plaster, from the litharge of at metal, with which it is made. The dia-ylon, when mixed with white rosin, con-titutes the article known as adhesive plaster, spread on linen or cotton, and when cut into strips, called strapping. The other plasters of most frequent use are the strengthening plaster (*emplastrum roborans*), which is nearly the same as the lead plaster (*emplastrum plumbi*), only with the addition of carbonate of iron; blister plaster (*emplastrum lyttæ*), made with wax, rosin, lard, and powdered Spanish flies. Opium and mercurial plasters are also occasionally used, but not frequently; there are a few others, but the above constitute by far the most important. Of adhesive plaster we have already spoken, and also of the black adhesive, or court plaster.

The objects for which plasters are usually applied are to promote absorption, as discutients, such as the galbanum, or mercurial plaster; to support a part, when they are called strengthening, for which purpose the *emplastrum roborans* is used; to act as an expectorant in hoarsenesses and colds, when a stimulating plaster, called a Warming plaster, is employed: the last action which is excited by a plaster is that of blistering, an effect produced by the continued application for some hours of a plaster composed of the *emplastrum lyttæ*. Plasters are generally spread on leather, except a blister, which is always made on adhesive plaster. The leather in the first instance is cut into the shape required—either round, oval, oblong, or heart-shaped, according to the part on which it is to be applied; the plaster, previously melted in a ladle, or by means of the spatula on a piece of brown paper, is then to be poured, but not too hot, in the centre of the form, and by means of the instrument called a plaster spatula (which is a kind of small, elongated flat iron, with a shank and handle), made moderately hot, is carefully and smoothly extended round the shape, leaving about an inch and a half of margin in all directions, according to the shape. The beauty of a well-spread plaster is to have its surface perfectly even, and the margin regular and clean.

To prevent the shrivelling up of the skin, or the plaster coming through, a thick piece of the sheepskin is to be selected, and care used in neither pouring the melted plaster too hot on the leather, nor using the spatula at too great a heat. Blisters are generally spread by the thumb, the plaster being first softened with the fingers. It can, however, be spread much neater and better with the spatula slightly heated for the purpose. The shape of the blister must be first cut out of a length of adhesive plaster, and the blister plaster extended in the same manner, only leaving a wider margin, which should be nicked with the scissors in different places, to enable it to adhere to the skin when the blister is applied.

One of the most useful of all the plasters, after the blister, is the warming plaster. This is an admirable application for colds of all descriptions, where a blister is not actually necessary, and will be found to afford great relief in cases of asthma, catarrh, hoarseness, or oppression at the chest. This useful application is made by melting on a piece of thick paper about two ounces of litharge plaster, a drachm of rosin, and two drachms of the blister plaster; the whole is to be then mixed with the point of the spatula, and spread on leather in the manner already described. The above proportions will make a plaster large enough to cover the chest, and may be worn for several weeks, removing it occasionally, washing the chest, heating it slightly before the fire, and re-applying it to the same place.

Soap plaster is only used in cases of what are called bed-sores, or for any abrasion of the skin from riding, or other causes, where the skin is broken. This plaster should be very neatly spread, made perfectly smooth, and is often required of considerable size, to cover the hips or spine, and sometimes, with tender feet, to protect the soles.

The shape of blisters meant for the backs of the ears is very peculiar, and resembles in shape a figure 6; the O part of the figure is applied on the cheek and jaw, the upper or tail part sweeping round the ear toward the temple. From this it will be evident that the blister spread for the left ear will not suit the right ear. The time a blister plaster should be kept on depends much upon circumstances; with an adult it is customary to retain it till it rises, an operation that sometimes takes as many as eighteen or twenty hours to effect; with children, however, and old people, where the circulation is languid, a blister should only be kept on from four to ten hours.

In spreading plasters, it must be remembered that the rough or undressed side of the skin is the part on which the melted ingredients are to be spread.

PLASTER OF PARIS.—This species of lime, commonly known as *gypsum*, is only used by the professional physiologist to make plaster casts of interesting anatomical or surgical cases, from the living or dead subject, colouring the cast afterwards according to nature, or the actual appearance of the disease. Such casts are of great value to the medical student, who, by a frequent examination of them, when properly arranged in the museum of his schools, becomes beforehand familiar with the features of a case he may not have had an opportunity of previously studying in the living body.

PLATYSMA MYOIDES.—One of the thinnest and most delicate muscles of the body, consisting of a series of minute muscular threads, running obliquely downwards from the chin, ear, and neck, to be inserted in the collar-bone and shoulders. Some anatomists question whether this muscle has any bony origin or insertion whatever, rising, as they assert, from, and being inserted into, the cellular tissue immediately beneath the cuticle. The object of this muscle is to retract the skin, and prevent it from puckering when the jaw is drawn down.

The knowledge of the direction of the fibres of the platysma myoides is of consequence to all who may be called upon to open the external jugular vein, as, after making the first incision in the cuticle in a perpendicular manner, this muscle, which will be seen below, must be divided with a slight scratch of the bistoury or lancet in a horizontal direction, or directly across the course of its fibres, so as to give, by their retraction, an easy access to the vein, which will then come in sight.

PLETHORA.—Fulness of blood; a redundancy of a part or the whole system; an excess of blood, over and above the healthy requirements of the body. A plethoric state of the system may arise from many causes,—from an excess in the quantity of the food and drink taken; from the sudden check of a customary evacuation; from cold, applied to the surface of the body, causing a suspension of the usual secretions; and from a sedentary habit. The great danger arising from plethora is the fear of apoplexy or congestion: the persons, of course, most liable to such a condition are the corpulent and florid; with such individuals great circumspection should be observed in regard to their living, and all evidences of an excess of blood immediately met by prompt and effective measures, either of depletion, or abatement in the quantity of the foods which may have provoked it.

Bleeding, though a most necessary measure when the plethora has induced coma, drowsiness, or throbbing pains in the head, should never be employed when the premonitory symptoms are taken in time, and there is sufficient space to adopt other and better remedies; for it is a well-known fact, that plethoric, ruddy-faced persons, who have generally good appetites, recover the blood lost in a very short time—in a much shorter time, indeed, than persons of a different temperament. In such cases, when it is necessary for a full-bodied man to reduce the amount of his circulation, he should proceed to act upon a system, and resolve to carry it out without flinching till the effect aimed at is obtained.

For this purpose, all malt and spirituous liquors should be at once suspended, and a little claret or cider used as a beverage instead. Soups, pastry, jellies, and rich foods should be prohibited, and game, fish, and beef, with biscuit or greens, substituted for the ordinary aliments. A warm bath should be taken occasionally, and the entire body, part by part, sponged daily with cold vinegar and water; every part, after being dried, to be effectually rubbed with the flesh-brush till the skin feels soft, genial, and oily. Though violent exercise is neither advisable nor safe for plethoric persons, some amount of bodily exertion should be gone through every day, either by riding, walking, or fencing.

Some persons are in the habit of pulling themselves down, as it is termed, by means of periodical strong doses of medicine, such as salts, or drastic pills, or other purgatives. This system, however, is quite as injurious to the body as that of frequent bleeding, and is equally liable to injure the constitution. The bowels should never be allowed to become confined, or, unless absolutely necessary to correct a sudden determination of blood to the head, should never be acted on violently; a simple and regular diet, with a glass of cold water occasionally at bedtime, will generally keep them sufficiently open. The plethoric man or woman should always bear in mind that the skin is the great safety valve of the constitution, and to maintain that organ in a perfectly healthy state, and fit to carry off the redundancy of blood from the system, it must be kept constantly clean, and its pores, or exhalent vessels, open, to pour off, in the stream of insensible perspiration, the excess which, if left undischarged, is certain, sooner or later, to lead to headache, drowsiness, coma, congestion, and possibly apoplexy.

Physicians have divided plethora into several kinds, as that of the veins of a part, and of the whole, or according to the theories entertained as to the cause of such accumulation.

Nature often acts the physician for the plethoric man, and at the critical moment, when the loaded vessels can bear no further pressure, opens an instant issue from the nostrils or bowels, by pouring out a stream of blood, that not only relieves the pressure, but in many instances saves the patient's life.

This breaking out of blood from the nose, or giving way of one of the hemorrhoidal veins, or a pile, is one of those critical evacuations which should on no account be hastily stopped, as being one of the greatest blessings that could have befallen him.

PLEURA.—The lining membrane of the thorax or chest: a fine, thin, serous sac, exactly analogous to the *peritoneum*, or investing membrane of the abdomen, with this exception,—that the pleura is composed of two distinct bags, one for each side of the chest. One face or side of the pleura lines the *diaphragm*, or midriff, the ribs, and the organs of the cavity, while its smooth faces or sides coming together allow of a constant easy motion to take place, without friction or injury. For a better understanding of this membrane, see article PERITONEUM.

The two bags of the pleura do not entirely fill up every available inch of the cavity, two small triangular spaces being left, one in front and one behind, called by anatomists the anterior and posterior *mediastinum*. Through the posterior space pass the *œsophagus*, or gullet; the *trachea*, or windpipe; the aorta; the pneumogastric nerve; the *vena azygos*, or solitary vein; the thoracic duct, and the great sympathetic nerve. The anterior mediastinum, in the fœtus, or unborn child, contains the thymus gland, which becomes absorbed as the child advances in life. Anatomists have given different names to the pleura, according to the part enclosed in its serous tunic; thus, that portion investing the lungs is called *pleura pulmonalis*, the part covering the midriff *pleura diaphragmatica*, and *pleura costalis* for the portions lining the ribs. The pleura is remarkably liable to inflammation, and particularly to that form called adhesive inflammation, causing portions of it to adhere or grow together, or to the ribs, thereby materially interfering with the free and easy motion of the lungs, by preventing their rise and fall, these adhesions most materially checking the healthy action and full inflation of the lungs.

Like the peritoneum, the pleura is liable to sudden inflammation, though in this case the disease is much more manageable, and by no means so dangerous, as the other. Inflammation of the pleura is called—

PLEURISY, OR PLEURITIS.—An inflammation of the pleura, or lining membrane of the chest, accompanied with continued fever, difficulty of breathing, and pains, or, as they are called, stitches in the side.

The *causes* of this rather common form of inflammation are cold, blows, falls, accidents, or fractures of the ribs, or whatever may directly or indirectly induce inflammatory action.

Pleurisy is divided into the acute and chronic.

The *symptoms* of the acute commence with chills, rigours, and a weight in the chest, which in a few hours becomes a sharp pain, augmented by every inspiration of air in breathing, and generally felt about the sixth or seventh rib, darting from that point forward to the breastbone, or backward through the shoulder-blade. The breathing is hard, difficult, and performed with great anxiety, attended with a frequent short, dry cough, every inspiration and every cough adding greatly to the patient's suffering, and all the distressing symptoms being aggravated by lying on the affected side, and by pressure. The pulse is hard, contracted, and jarring; the tongue is white, the water scanty and high coloured; the skin hot; the bowels generally confined, and the countenance suffused. In some cases the symptoms are even more severe, more diffused, and occasionally less important than those described. In general, the symptoms begin to abate about the fourth day, the cough and difficulty of breathing (*dyspnœa*) subsiding at the same time, while the inflammation of the pleura usually terminates in adhesion, effusion, or by passing into the chronic form of the disease.

The *treatment* resolves itself into reducing the local inflammation, and then, if possible, preventing the diseased action passing into effusion. To effect the first object, the patient should, if young and robust, be bled till a sense of sickness or fainting arises, and the breath can be drawn without pain. This beneficial change is to be maintained by means of antimony and calomel, with purgative medicines, as in the following prescriptions. It is seldom advisable to repeat the bleeding, though, should there be any severe recurrence of the pain, a few ounces of blood may be taken from the part, either by leeches or by cupping. The calomel powders should be continued till the inflammatory action is completely subdued. Take of—

Nitrate of potass . .	1 scruple.
Tartar emetic . . .	4 grains.
Camphor water . . .	6 ounces.

Mix: two tablespoonfuls to be taken every two hours, with one of the following powders. Take of—

Calomel	18 grains.
Powdered rhubarb . .	24 grains.

Mix, and divide into six powders; one to be given with each dose of the above mixture. Take of—

Epsom salts	1 ounce.
Carbonate of magnesia	1 drachm.
Infusion of senna . .	6 ounces.

Dissolve, and add—

Peppermint water . .	2 ounces.

Mix: the fourth part to be taken every four hours, till the bowels are freely acted on.

It is sometimes advisable to increase the quantity of the tartar emetic given as above, and, if the mixture is repeated, to make it with *six* instead of four grains. Some practitioners prefer giving the tartar emetic and calomel together in the form of powders, half a grain of the former to 4 grains of the latter, and repeating the dose every three hours till the system is slightly affected by the mercury.

When the oppression at the chest is severe, and the patient afraid to cough, or even to lie down, or inflate his lungs, great benefit is frequently obtained by combining opium with the calomel, as in the following formulary. Take of—

Calomel	18 grains.
Powdered opium . .	3 grains.
Powdered kino . . .	1 scruple.

Mix, and divide into six powders; one to be given every two hours as a substitute for the calomel and rhubarb powders.

CHRONIC PLEURISY.—Though this form of the disease usually succeeds the acute, it sometimes arises without first passing through that stage.

The *symptoms* in either case are attended with a species of hectic or remittent fever; a quick, small, and hard pulse; difficulty of breathing, increased by all exertion; almost total incapability to lie on the *healthy side;* and, after a time, considerable emaciation of the body. This form of pleuritis generally results in effusion of various kinds in the sac of the pleura: sometimes of coagulable lymph, sometimes of serum, and occasionally of pus.

The *treatment* consists in promoting the absorption of the effused fluid, and then in supporting the patient's strength. To effect the first of these objects, the remedies are divided into external and internal. When the pain is very acute, leeches or the cupping-glasses should be applied to relieve it, while stimulating applications are to be employed to promote absorption. These may consist either of a blister of Spanish flies, a mustard and flour poultice, or the tartar emetic ointment, so employed as to keep up a successive crop of pimples, or by rubbing in mercurial ointment and camphor. At the same time that one or other of these applications is being used externally, the following mixture and pills should be employed internally.

Take of—

Hydriodate of potass .	1 drachm.
Mint water	5 ounces.
Simple syrup . . .	2 drachms.
Tincture of orange peel	1 drachm.

Mix. Of this, one tablespoonful is to be taken four times a day, with a Plummer's pill night and morning. The general strength is to be supported by a cautious use of tonics, and a generous diet, judiciously administered.

When the fluid effused consists of an accumulation of pus, it is very seldom absorbed, but either forms for itself an exit by ulceration through the tubes into the lungs, or through the diaphragm into the abdomen. When the symptoms are very urgent, it often becomes necessary to resort to the operation of "tapping" to draw off the effused fluid. In all cases where there is pus, or large collections of fluid in the pleura, the disease ceases to be designated as *pleuritis*, and receives the name of *Empyema*, which see. Should sudden exhaustion arise, or the head become affected in a manner to threaten delirium, stimulants of ammonia, camphor, and laudanum, with ether, may be necessary; but as the remedies requisite must depend upon the symptoms, or combination of symptoms, that present themselves, the exact medicines necessary must be left to the discretion of the attendant to prescribe at the time.

PLEURODYNIA.—A muscular rheumatism of the side, principally affecting the intercostal muscles. This disease can only be confounded with pleurisy, but may be easily distinguished from that by the absence of the constitutional symptoms, by the pain being generally relieved by pressure and augmented by any sudden motion—the abrupt turning of the body, a quick inspiration, by elevating the arms, or by anything that calls the muscles of the part into action. Females are more subject to this disease than males. It is usually found accompanied with debility, especially that kind resulting from uterine irregularities. In such cases it is almost always the LEFT side of the chest that is affected, while with males it is generally the RIGHT side. Pleurodynia may be symptomatic, or depending upon other causes, or it may be spontaneous or idiopathic. When the latter is the case, the TREATMENT should consist of a warm bath, or hot fomentations to the part, followed by a blister or a flour and mustard poultice; and when the pain is of a moderate character, by a plaster of belladonna or opium, and the after application of a warming plaster. The internal remedies, after an effective aperient, are either colchicum or guaiacum. See RHEUMATISM.

PLEUROSTHOTONOS.—A rigid spasm or *tetanus* of the muscles of the side. That form of tetanus in which, by the spasm or contraction of the lateral muscles of the trunk, the body is bent on one side or the other in the form of an arch. See TETANUS, and LOCKED JAW.

PLEXOMETER.—The name given by the professors of auscultation to the medium, or plate of ivory, on which percussion is made in sounding the chest for apprehended diseases. The sounding-plate is used to give a more distinct echo to the lungs, when the chest is tapped or struck by the fingers, whether the medium is an ivory or metallic plate. See STETHOSCOPE.

PLEXUS.—A congeries or network of nerves, forming a web of minute nervous filaments. Though veins and arteries sometimes form a plexus, the term is generally applied by anatomists to an interlacing of nerves. All the great thoracic and abdominal organs receive their nervous power from a system of plexuses.

PLICA POLONICA. — Tangled or matted hair. A disease to which the serfs of Poland are so subject, that the complaint has been identified with that country. The peculiarity of this affection preventing their rise and fall, these adhesions most materially checking the healthy action and full inflation of the lungs.

Like the peritoneum, the pleura is liable to sudden inflammation, though in this case the disease is much more manageable, and by no means so dangerous, as the other. Inflammation of the pleura is called—

PLEURISY, OR PLEURITIS.—An inflammation of the pleura, or lining membrane of the chest, accompanied with continued fever, difficulty of breathing, and pains, or, as they are called, stitches in the side.

The *causes* of this rather common form of inflammation are cold, blows, falls, accidents, or fractures of the ribs, or whatever may directly or indirectly induce inflammatory action.

Pleurisy is divided into the acute and chronic.

The *symptoms* of the acute commence with chills, rigours, and a weight in the chest, which in a few hours becomes a sharp pain, augmented by every inspiration of air in breathing, and generally felt about the sixth or seventh rib, darting from that point forward to the breastbone, or backward through the shoulder-blade. The breathing is hard, difficult, and performed with great anxiety, attended with a frequent short, dry cough, every inspiration and every cough adding greatly to the patient's suffering, and all the distressing symptoms being aggravated by lying on the affected side, and by pressure. The pulse is hard, contracted, and jarring; the tongue is white, the water scanty and high coloured; the skin hot; the bowels generally confined, and the countenance suffused. In some cases the symptoms are even more severe, more diffused, and occasionally less important than those described. In general, the symptoms begin to abate about the fourth day, the cough and difficulty of breathing (*dyspnœa*) subsiding at the same time, while the inflammation of the pleura usually terminates in adhesion, effusion, or by passing into the chronic form of the disease.

The *treatment* resolves itself into reducing the local inflammation, and then, if possible, preventing the diseased action passing into effusion. To effect the first object, the patient should, if young and robust, be bled till a sense of sickness or fainting arises, and the breath can be drawn without pain. This beneficial change is to be maintained by means of antimony and calomel, with purgative medicines, as in the following prescriptions. It is seldom advisable to repeat the bleeding, though, should there be any severe recurrence of the pain, a few ounces of blood may be taken from the part, either by leeches or by cupping. The calomel powders should be continued till the inflammatory action is completely subdued. Take of—

Nitrate of potass . .	1 scruple.
Tartar emetic . . .	4 grains.
Camphor water . . .	6 ounces.

Mix: two tablespoonfuls to be taken every two hours, with one of the following powders. Take of—

Calomel	18 grains.
Powdered rhubarb . .	24 grains.

Mix, and divide into six powders; one to be given with each dose of the above mixture. Take of—

Epsom salts	1 ounce.
Carbonate of magnesia	1 drachm.
Infusion of senna . .	6 ounces.

Dissolve, and add—

Peppermint water . .	2 ounces.

Mix: the fourth part to be taken every four hours, till the bowels are freely acted on.

It is sometimes advisable to increase the quantity of the tartar emetic given as above, and, if the mixture is repeated, to make it with *six* instead of four grains. Some practitioners prefer giving the tartar emetic and calomel together in the form of powders, half a grain of the former to 4 grains of the latter, and repeating the dose every three hours till the system is slightly affected by the mercury.

When the oppression at the chest is severe, and the patient afraid to cough, or even to lie down, or inflate his lungs, great benefit is frequently obtained by combining opium with the calomel, as in the following formulary. Take of—

Calomel	18 grains.
Powdered opium . .	3 grains.
Powdered kino . . .	1 scruple.

Mix, and divide into six powders; one to be given every two hours as a substitute for the calomel and rhubarb powders.

CHRONIC PLEURISY.—Though this form of the disease usually succeeds the acute, it sometimes arises without first passing through that stage.

The *symptoms* in either case are attended with a species of hectic or remittent fever; a quick, small, and hard pulse; difficulty of breathing, increased by all exertion; almost total incapability to lie on the *healthy side;* and, after a onsiderable emaciation of the body. rm of pleuritis generally results in ı of various kinds in the sac of the : sometimes of coagulable lymph, mes of serum, and occasionally of

treatment consists in promoting sorption of the effused fluid, and . supporting the patient's strength. ect the first of these objects, the es are divided into external and l. When the pain is very acute, or the cupping-glasses should be l to relieve it, while stimulating tions are to be employed to pro- absorption. These may consist of a blister of Spanish flies, a mus- nd flour poultice, or the tartar ointment, so employed as to keep successive crop of pimples, or by g in mercurial ointment and cam- At the same time that one or other se applications is being used ex- y, the following mixture and pills be employed internally.

› of—

driodate of potass .	1 drachm.
ıt water	5 ounces.
ıple syrup . . .	2 drachms.
cture of orange peel	1 drachm.

Of this, one tablespoonful is to be four times a day, with a Plummer's ght and morning. The general th is to be supported by a cautious tonics, and a generous diet, ju- ly administered.

n the fluid effused consists of an ulation of pus, it is very seldom ed, but either forms for itself an r ulceration through the tubes into ıgs, or through the diaphragm into domen. When the symptoms are rgent, it often becomes necessary to to the operation of "tapping" to draw › effused fluid. In all cases where is pus, or large collections of fluid pleura, the disease ceases to be ated as *pleuritis*, and receives the of *Empyema*, which see. Should ı exhaustion arise, or the head be- affected in a manner to threaten m, stimulants of ammonia, cam- and laudanum, with ether, may be ary; but as the remedies requisite lepend upon the symptoms, or com- on of symptoms, that present them- the exact medicines necessary must to the discretion of the attendant scribe at the time.

EURODYNIA.—A muscular rheu- n of the side, principally affecting the intercostal muscles. This disease can only be confounded with pleurisy, but may be easily distinguished from that by the absence of the constitutional symptoms, by the pain being generally relieved by pressure and augmented by any sudden motion—the abrupt turning of the body, a quick inspiration, by elevating the arms, or by anything that calls the muscles of the part into action. Females are more subject to this disease than males. It is usually found accompanied with debility, especially that kind resulting from uterine irregularities. In such cases it is almost always the LEFT side of the chest that is affected, while with males it is generally the RIGHT side. Pleurodynia may be symptomatic, or depending upon other causes, or it may be spontaneous or idiopathic. When the latter is the case, the TREATMENT should consist of a warm bath, or hot fomentations to the part, followed by a blister or a flour and mustard poultice; and when the pain is of a moderate character, by a plaster of belladonna or opium, and the after application of a warming plaster. The internal remedies, after an effective aperient, are either colchicum or guaiacum. See RHEUMATISM.

PLEUROSTHOTONOS.—A rigid spasm or *tetanus* of the muscles of the side. That form of tetanus in which, by the spasm or contraction of the lateral muscles of the trunk, the body is bent on one side or the other in the form of an arch. See TETANUS, and LOCKED JAW.

PLEXOMETER.—The name given by the professors of auscultation to the medium, or plate of ivory, on which percussion is made in sounding the chest for apprehended diseases. The sounding-plate is used to give a more distinct echo to the lungs, when the chest is tapped or struck by the fingers, whether the medium is an ivory or metallic plate. See STETHOSCOPE.

PLEXUS.—A congeries or network of nerves, forming a web of minute nervous filaments. Though veins and arteries sometimes form a plexus, the term is generally applied by anatomists to an interlacing of nerves. All the great thoracic and abdominal organs receive their nervous power from a system of plexuses.

PLICA POLONICA. — Tangled or matted hair. A disease to which the serfs of Poland are so subject, that the complaint has been identified with that country. The peculiarity of this affection of the scalp is that the hair becomes so matted together as to hang like a cow's tail, in wild, streaming masses, resembling half unstranded ropes.

There are several varieties of this disease, arranged according to the disposition of the hair. Sometimes the crop is mingled and bound together in one dense thatch, that serves as a turban or protecting pad to the head; at others it hangs in matted strands; sometimes in two or three tangled locks. Plica Polonica appears to be originally a disease of the scalp, which in time exudes a foul, tenacious secretion, that mats the hair together, and, engendering vermin, renders the sufferer every way disgusting and loathsome. The disease is the result of bad living and dirt, but is fortunately unknown, at least in its Polish condition, in this country. See Scalp.

PLUG.—The practice of plugging is sometimes employed with the most signal success, both in bleeding wounds and in urgent cases of midwifery. In deep incised and punctured wounds, when there is not time to secure and tie the bleeding arteries, a conical wedge of lint or wool forced into the wound, till it reaches the mouth of the vessel, is often of the greatest service, as it enables the clot to form in the artery, which thus in a short time acts as a natural plug, preventing the further escape of blood, either permanently or till there is time to adopt other measures of security.

It is, however, in the practice of midwifery, in cases of flooding or abortion, or after the expulsion or removal of the after-birth, when the uterus either contracts like an hourglass, or refuses to contract at all, and when the blood comes away in those gushes which have obtained for it the expressive name of *flooding*, that the timely use of the plug is most beneficial and important, the life of the patient often depending on the employment of this simple expedient, and the judgment of the surgeon in knowing when to employ it. The mode of using the plug in such cases, and the material to be employed for the purpose, we shall now proceed to explain. As the space to be filled is large, and the bleeding surface far removed, the article employed must be such as will at once answer both ends, of filling up the space and pressing on the vessels. The most convenient and best article for the object in view is the accoucheur's silk handkerchief, which he should hastily grease by smearing his hand with the lard or pomatum always ready on such occasions, and then rapidly, but completely, beginning with the point, pass it up the passage to the extremity of the vagina. If the uterus has risen, as it sometimes will do, in the pelvis, it may be necessary to pass a portion of a second handkerchief, so as to insure contact with the mouth of the womb, and close up all egress. If the patient should be on her back, the knees are to be secured by a handkerchief, cold water or ice applied to the abdomen, and brandy and ammonia administered in spoonfuls, as the urgency of the case may seem to demand, while silence and all jarring of the room is to be rigidly enforced. See Labour, and Womb.

PLUMBUM.—Lead, which see.

PLUMMER'S PILL.—The name of the compound calomel pill of the Pharmacopœia; a very mild, useful alterative and diaphoretic medicine, the chief action of its components being directed on the skin; hence the value of this preparation, in conjunction with decoction of sarsaparilla or dulcamara, in chronic diseases of the skin. Plummer's pill is sometimes given to produce *ptyalism*, or salivation. This is a 4-grain pill, and the dose is either one every night or one night and morning.

PNEUMONIA.—An inflammation of the substance of the lungs, as *pleuritis* is an inflammation of the lining membrane of that organ. See Inflammation of the Lungs.

PNEUMONIA NOTHA.—Spurious or false pneumonia. A name formerly employed by physicians to designate a congested state of the lungs, attacking elderly people. A species of Asthma, which see.

PNEUMO THORAX.—Air in the chest, sometimes called wind-dropsy. This disease may occur in three ways:—1st, by the rupture of some of the cells of the lungs, allowing the escape of air into the bag of the pleura; 2nd, by an external injury of the chest, a stab, or fracture of a rib, with a corresponding wound, admitting the atmospheric air into the pleura; and 3rd, by a secretion of air in the part itself,—for air, like fluids, is secreted by the tissues of the body.

Treatment.—When the air cannot be disposed of by absorption, it is to be discharged by means of an operation, the same as for drawing off fluids from the thorax. See Tapping.

POC.—A pustule, a scab, a dent in the cuticle, caused by a small abscess in the skin. The singular of pox.

PODAGRA.—The professional name for gout, though the term is strictly confined to gout in the feet. See GOUT.

PODOPHYLLUM, or VEGETABLE CALOMEL.—The article bearing this name is a very recent addition to the Pharmacopœia; it is in dark brown cakes, not much unlike elaterium in outward characters, and is the product of the dried root of a North American plant bearing the same name.

The podophyllum is a resinous extract, and the active principle of the plant, and, exercising strong purgative powers, it has, from the similarity of its action on the secretions, received the name it bears of vegetable calomel. The dose is from half a grain to 1 grain, according to the age and strength of the patient.

PODOTHECA.—A name sometimes applied to the cuticle of the foot.

POISONING.—The articles used for the purpose of murder and suicide are so numerous, and may belong either to the animal, the vegetable, or the mineral kingdom, and produce such contrary effects, that we shall first classify them, and then proceed to the method of treatment to be pursued in each.

POISONS.—It is a well-known fact that everything in nature, the most innocuous, even our daily food and natural beverage, if taken in excess, becomes a poison, either by destroying life at once, or inducing a disease which produces that result. The mind also becomes an agent of mischief to the body, and our uncurbed passions may prove as swift and death-dealing in their consequences as strychnia or prussic acid. As in good there is evil, and in food there is death, so in poison there is physic; and those principles which are the most subtle and fatal often yield us some of our best and most reliable medicines. Under these circumstances, the question, What are poisons? becomes an inquiry very difficult to answer. Certain substances, however, even in comparatively small quantities, produce such violent and dangerous effects, that, irrespective of any other property, they have been classed as poisons. And for the still easier understanding of this important branch of medical education, such substances have been classified according to the kingdom to which they belong—the animal, vegetable, or mineral,—or according to the most marked class of symptoms they produce when taken into the stomach, such as the corrosive, the irritant, and the narcotic, and several others, according to the theory or the experience of the toxicologist who frames the orders or classes. But as this is not a professional work, but a dictionary, designed for the information and benefit of the public generally, and for the guidance of the non-professional reader, to whom simplicity is of far more importance than scientific arrangement, we shall eschew the usual medical system, and content ourselves with giving the kingdom to which each poison belongs, and then proceed *seriatim* with each article in the sequence of its importance. Before commencing with our theme, however, it will be necessary to give a few PRELIMINARY OBSERVATIONS. The legal meaning of the word poison is the reception into the stomach of some substance in such quantities as are capable of destroying life. Poisons, however, may be taken in small and gradually augmented doses, till eventually a large amount of the deadly compound may be taken without producing any dangerous, or immediately dangerous, consequences. Opium, belladonna, tobacco, and even arsenic, are examples of some such medicines. Poisons may be fatal on man, and harmless if taken by the lower animals; consequently, the testing of dogs, rabbits, and such animals, with suspected poisons, affords no reliable data by which to argue the effect of the same article on man. In the eye of the law, it is the *intention* which constitutes the criminality of the offence of poisoning. The practised poisoner adopts many modes of introducing the deadly drug into the system, both of the living and the dead subject. The most ordinary channels of access to the brain or heart are the lungs, the nostrils, the mouth, the fundament, and the skin. The Borgia family were adepts in the science of poisoning, and by the gift of a ring, a rose, or a pair of gloves, could carry off the victim on whom they smiled more quickly and less offensively than the modern criminal, with his clumsy agent of strychnine or arsenic. Though the metals are among some of our most deadly poisons, it is only when combined with oxygen that they become so. An *ounce*, or much more, of pure mercury may be swallowed with impunity, but if two atoms of oxygen are added to a few grains of the metal, the article becomes a violent poison. The symptoms of poisoning are by no means uniform; the extreme pain and convulsions, so often mentioned as prominent features, are frequently entirely absent. It sometimes requires great judgment to distinguish the symptoms of disease from those of poisoning, the acrimony of the bile in some cases assuming all the characters of an irritant poison. If poisons are injected, or placed within and about the anus, within two hours after death, an inflammatory effect will be produced quite strong enough to produce a suspicion of murder or suicide, and, artfully planned, may lead to the implication of some innocent person. The action of all poisons on the system is either local or general.

MINERAL POISONS.

This class embraces four orders,—Metals, Mineral Acids, Alkalies, and Earths.

METALS.

These include arsenic, mercury, lead, copper, antimony, and silver.

Symptoms.—The symptoms arising from the above poisons are so nearly alike, with one or two special peculiarities, that for perspicuity they may be classed under one description. According to the solubility and potency of the poison, the symptoms may commence in from ten minutes after being taken to half an hour, and begin with pain in the stomach, a burning heat extending up the gullet and pervading the whole of the mouth and fauces. Violent vomiting soon after sets in, with purging. The pain in the stomach extends over the abdomen, producing a sense of burning agony; the anus and mouth become excoriated, the skin is dry and parched, the face shrunk and pallid, an insatiable thirst compels the sufferer to call for constant supplies of water, and cramps of the thighs and legs rack him with augmented agony. In addition to these, in arsenic, the tongue is swollen, the muscles of the throat become rigid, there is a tremour of the extremities, and violent convulsions. The pain is most acute about the navel in cases of lead-poisoning, and there is paralysis; while with mercury, there is swelling of the gums, and salivation.

ARSENIC.—The common article used as a poison belonging to this metal is the white oxide; the preparation, however, whether the oxide, Fowler's solution, or Scheele's green, is immaterial, the symptoms and the means employed being the same.

Remedies.—An emetic of 30 grains of sulphate of zinc in a tumbler of warm water should be given instantly, and vomiting promoted till the stomach-pump can be got into operation. Should any delay occur in the arrival of the instrument, frequent draughts of mucilage or sugar and water should be given, and then ejected by touching the fauces with the feathers of a quill; or draughts of oil and water, lime water and milk, or either separately, the stomach being emptied after each quantity of liquid. A tablespoonful of mustard seed, should no other emetic be at hand, may be given in water for that purpose, as it acts even more effectively than the zinc. When it is believed that the arsenic has been expelled from the stomach, either by a succession of vomitings or by the use of the stomach-pump, charcoal mixed in water should be given, to decompose whatever particles may yet remain in the stomach.

Antidotes.—The following articles are supposed to act chemically on the arsenic in the stomach, and by decomposing the poison render it inert:—Magnesia and water; gelatinous hydrated sesquioxide of iron; sesquichloride of iron, or persulphate of iron, saturated by carbonate of ammonia; sesquioxide of iron in water; and lastly, charcoal and water.

MERCURY.—The most usual preparation of mercury employed as a poison is the corrosive sublimate, known as the oxymuriate, or bichloride of mercury. From the great solubility of this salt, its action is very rapid, and from its corrosive nature, the symptoms most severe.

Remedies.—Albumen is known, when mixed with water, to decompose the salt; for this purpose, basins containing about half a pint of cold water should be ranged in order, and the whites of six or eight eggs poured into one, and the yolks into another, the patient drinking each potion off alternately, as soon as prepared; and when the stomach can contain no more, the whole should be expelled by vomiting, and the same process repeated. Gluten, if it can be obtained, may be employed alternately with the eggs, or flour and water may be used, hastily mixed with cold water. But as the chief object is to dilute the poison, and expel it from the stomach, when eggs cannot be procured in abundance, milk or milk and water may be used till the stomach-pump can be brought into operation.

Antidotes.—Two parts of finely powdered iron filings, and one part of zinc.

LEAD.—The acetate, or sugar of lead, and the two oxides, the red and white, are the preparations most commonly used to destroy life. Poisoning by lead is as often accidental as intentional, the mineral being absorbed through the skin, or drunk in water from leaden cisterns; it is often taken, too, in wine, from the unprincipled practice of adulteration, and the habit of correcting sour wine with sugar of lead.

Remedies.—For white lead, copious draughts of vinegar should be given immediately, and followed as quickly as possible by an emetic of 30 grains of sulphate of zinc, and repeated doses of sulphate of magnesia, or sulphate of soda, or Epsom and Glauber salts; these are to be followed by a dose of castor oil and laudanum, and if the pain is excessive, by the warm bath, and pills composed of camphor and opium.

Antidotes.—Mercury and tartrate of antimony have both been employed to counteract the poison of lead; but sublimed sulphur, and sulphuretted hydrogen, are much safer antidotes. The former may be given, after the above remedies have been employed, in teaspoonful doses; and to obtain the latter, the sal polychrist dissolved in water, in the proportion of two drachms to a tumbler of water, may be taken every four or six hours; or, if near the spa, frequent draughts of Harrowgate water. For those whose systems are completely saturated with this mineral from constantly working among lead, the electro-chemical bath affords the readiest means of extracting the poison from their bodies; or where such means are unattainable, a bath may be extemporized by dissolving 4 ounces of sulphuret of potassium in 30 gallons of water, and using it every day, employing friction over the body while in the medicated water.

COPPER.—Verdigris is the form in which this poison is generally taken. The features that more particularly distinguish its effects on the body are—excessive thirst, fainting, a copper or brown rash on the skin, and a very small, trembling pulse.

Remedies.—An immediate emetic of sulphate of zinc, with plenty of warm water, to assist vomiting; white and yolk of eggs in water, separately, and if necessary, the stomach-pump, and castor oil.

Antidotes.—Sugar is said to be one of the best antidotes for verdigris, and iron filings, either alone or mixed with zinc, in the proportion of two parts of the first to one of the second, is the next in reliable importance. When copper has been taken as a poison, or a copper coin swallowed, no *acid should be given*, and in the latter case the sole dependence placed on large, or at least effective, doses of castor oil.

ANTIMONY.—Tartar emetic, or the tartrate of antimony, is the preparation which most frequently produces serious consequences. In addition to the general symptoms caused by a poisonous quantity of this mineral, it excites a rough, metallic taste in the mouth, great prostration of strength, excessive pain about the region of the heart, vertigo, constant purging, cramps, and difficulty of breathing.

Remedies.—Strong black tea, decoctions of oak or Peruvian bark, or logwood if the others are not convenient; mucilaginous drinks, or syrup and water; and if vomiting does not exist, it must be produced, and any of the above remedies repeated, the stomach again emptied, and again replenished with the astringent drinks, or mixtures of catechu, kino, or tincture of galls in water. When the prostration and symptoms are very severe, opium must be given, and a blister laid on the pit of the stomach.

Antidotes.—Tannic acid in solution, and any of the astringent tinctures or extracts in water.

SILVER.—The nitrate of silver, or lunar caustic, is the preparation most generally taken by mistake or accident as a poison.

Remedies.—This is one of the most easily treated of all the mineral poisons, and merely requires a number of drinks containing common salt, or sea-water, and then to discharge them by means of an emetic, either of ipecacuanha (20 grains), or a tablespoonful of mustard seed.

Antidotes.—The best and most certain of these agents is the muriate of soda, professionally known as the chloride of sodium, or common salt. This article, given in solution, decomposes the nitrate of silver, should any particle be left in the stomach after the vomiting; finally, a dose of castor oil will carry off any poisonous *débris* left in the system.

MINERAL ACIDS.

Under this head are included the sulphuric, nitric, nitrous, muriatic or hydrochloric, and the oxalic acids.

Symptoms.—These in a great measure resemble those described under metal poisons, only still more corrosive and immediate in their effect:—violent pains in the mouth, throat, and stomach, as if the whole entrails were on fire; excessive vomiting follows soon after, a yellow, fibrous mass being ejected from the stomach, purging succeeds, with strangury, and a constant *tenesmus*, or exhausting pain at the fundament. In addition to the pains, vomiting, and anguish endured, the surface of the body is contracted, and covered with a cold sweat.

Remedies.—Magnesia, either calcined or carbonate, or chalk, mixed with water, should be the first agents which are employed, in the hope of neutralizing the acid, by its combination with one or other of the earths used. In default of these, the plaster from the ceiling should be broken down, and, hastily mixed with water, poured into the stomach, and so continued till more efficient remedies, such as chalk or magnesia, can be obtained. In default of these, soapsuds, or scrapings of yellow soap into water, are to be drunk off at once. The next articles of value are oils,—olive, almond, cod liver, or even fish or lamp oil; and lastly, milk, and honey and water. The great aim of the surgeon is first to neutralize the acid, and empty the stomach by vomiting, and then, by frequent injections of water (slightly charged with carbonate of soda) into the stomach, by means of the pump, filling and then emptying the organ, to neutralize any particles of acid still adhering to the coats of the stomach.

Antidotes.—The after remedies employed in cases of poisoning by means of the mineral acids, must consist of saline and oleaginous mixtures, the latter to consist of olive, castor, or almond oil, mucilage, honey, opium, and water.

ALKALIES.

This heading embraces potass, soda, ammonia, and *calx*, or lime.

Symptoms.—These are of an irritating, corrosive character. The articles being all oxides of metals, and consequently extremely caustic, cause intense pain along the alimentary canal, as soon as their salts come in contact with the delicate membrane lining the stomach and bowels, causing acute pain, vomiting, purging, excoriation of the mouth and fauces, with many of the symptoms common to the metal and mineral acid poisons.

Remedies.—These are the same in all the four cases, and consist in giving such agents as will the soonest neutralize the caustic nature of the poisons. Vinegar and water in plentiful doses, sour beer, citric acid, lemon, orange, or lime juice, are the best articles for the purpose. As soon as this neutralization has been effected, an emetic of ipecacuanha (20 grains) should be given to empty the stomach; and if necessary the acids repeated. When quicklime has been the source of poison, the stomach-pump may be required to thoroughly wash out the stomach with plain and acidulated water.

Buttermilk forms one of the best diluents that can be employed as an after remedy to restore the tone of the organ.

EARTHS.

The only article necessary to introduce under this head is baryta, and its salts.

The *symptoms* produced by this poison are of a corrosive, irritating nature. It causes great pain, violent vomiting, and effects analogous to those produced by the alkalies.

Remedies.—Those proper for the carbonate of baryta are a solution of Epsom salts and vinegar combined; while for the other preparations, strong solutions of Glauber or Epsom salts, or simple alum dissolved in water, form the appropriate means of relief in the first instance, followed by an emetic of the sulphate of zinc, the whole being succeeded by a dose of castor oil.

VEGETABLE POISONS.

The articles are extremely numerous which come under this head; the following, however, are those most frequently met with as poisons:—Opium, poppy, hellebore, veratrium, hyoscyamus, digitalis, colchicum, hemlock, belladonna, monkswood, strammonium, secale, and tobacco, with their active principles.

Symptoms.—The general indications of poisoning by vegetable substances are giddiness, confusion of sight, wildness of the eyes, palpitations, loss of memory, stupor, nausea, vomiting, distension of the stomach, twitchings of the muscles, delirium, and convulsions. The pupil of the eye, from opium, is generally *dilated*, though sometimes found *contracted*. When strammonium or belladonna have been taken, the pupil is greatly *dilated*, there is indistinct or double vision, the speech is affected, the voice falters, and the tongue and limbs become paralysed, while with hyoscyamus a raging madness is frequently added to the other symptoms.

Remedies.—Astringent mixtures of any kind, or decoctions of oak, cinchona, or logwood, are to be immediately given, the same as for antimony; or a mixture of oil and lime water, and magnesia and water, may be given till an emetic of sulphate of zinc (30 grains) can be administered to empty the stomach of the poisonous matters in it. When this has been effected, the same astringent drinks, or lime water and oil, and magnesia and water, are to be repeated, and the vomiting reproduced by pressing on the uvula, or tickling the fauces with a feather. When most of the solid substances have been cast up, the stomach-pump is to be employed to cleanse out that organ by repeated quantities of water.

Antidotes.—In opium, camphor, ammonia, and brandy are to be administered, cold water dashed on the head and shoulders, and the patient kept constantly moving, and sal volatile and hot coffee given every half hour during the walking about, which should be continued by relays of men for eight or twelve hours.

Hydrocyanic Acid.—Essential oil of bitter almonds, and laurel water, though narcotic poisons, exercise a still more rapid effect on the body than the plants just given, and demand a somewhat different treatment.

Remedies.—The flaccid body, the open, glistening eye, and the strong smell of bitter almonds emanating from the patient's mouth, proclaim at once the nature of the poison. The first measure to adopt is to force a cupful of water, in which carbonate of ammonia has been dissolved, down the person's throat; cold water must next be dashed over the face and chest, ammonia applied to the nostrils, and ammonia or sal volatile in water administered every few minutes, while the chest and face, having been wiped, are to be again abruptly wetted with another cold aspersion.

Antidotes.—The most important of these are 10 grains of sulphate of iron (green vitriol) dissolved in 1 ounce of water, with 1 drachm of the tincture of the sesquichloride of iron (steel drops); and, lastly, 1 scruple of carbonate of potass, dissolved in 2 ounces of water, is to be mixed with the first ingredients, and the whole instantly given to the patient. The next antidote in efficacy is 7 or 10 drops of the solution of chlorine, or of nitro-hydrochloric acid, mixed with water, and given a few times after the other remedies have been employed.

Iodine.—The symptoms produced by this drug are of the irritating and corrosive kind, with pain, heat, thirst, and vomiting. The

Remedies are decoctions of starch,—the best obtainable, especially the starch from wheaten flour; next in importance to this is arrowroot or tapioca boiled, then flour and water, and, lastly, boiled potatoes. All these, or as many as have been used, having decomposed the iodine, it is to be expelled from the stomach by an emetic, as in the other cases of poisons.

Animal Poisons.

Under this class are included decayed animal matters, sausages, cheese, reasty bacon, several kinds of fish, particularly mussels, Spanish flies, and the fungi.

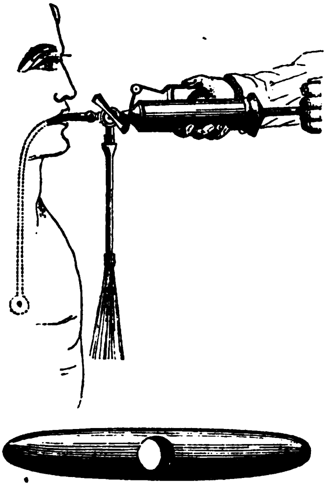
Symptoms.—With the one exception of cantharides, nearly all the above articles excite the same train of unpleasant symptoms, though sometimes in a modified degree; these usually commence within an hour or two of having partaken of them, and begin with a sense of uneasy fulness in the stomach, which soon amounts to nausea. Heat and pain in the head, with thirst, soon intervenes, followed by vomiting, attended with a burning heat in the throat; the skin feels hot and irritable, often followed by an eruption resembling nettle rash. If the vomiting is severe, it is succeeded by diarrhœa, and in cases of poisonous fungi and diseased mussels there is giddiness, or vertigo, faintings, coma, and occasionally convulsions. Cantharides, or Spanish flies, act on the system as a strong irritant poison, producing severe inflammation and subsequent exhaustion; the pain and heat of the stomach are excessive; the mouth and fauces are dry, hot, and red, while the effect excited in the bladder is still more serious, that condition of the parts known as strangury being produced.

Remedies.—In all cases an emetic should be the first consideration, and if no sulphate of zinc or other article for that purpose is at hand, a draught of mustard and water, a spoonful of mustard seed, or some warm water in which half a teaspoonful of salt has been dissolved, may be taken to produce the same effect, the vomiting being repeated till the stomach has been cleared of its offensive matters. In cases of poisoning by fungi, injections of starch and turpentine are often necessary; and in the case of cantharides, starch, or infusion of linseed and laudanum, must be thrown up the bowels repeatedly, while, after the emetic of sulphate of zinc, the stomach-pump should be used to clean out the organ affected.

Antidotes.—A little sal volatile and brandy and water will be required after most of the above articles, while in the fungi poisoning, a draught composed of 1 ounce of camphor water, 1 drachm of spirits of ether, and 10 drops of tincture of capsicum should be administered; and after cantharides, emulsions of almond oil, honey, gum arabic, made with camphor water, and containing about 10 drops of laudanum in each dose, should be given every three hours, linseed tea drunk as a beverage, and hot fomentations applied over the region of the bladder.

Poisonous Gases.

Though all the gases, if inhaled into the lungs, would prove fatal when imbibed in any quantity, it is only carbonic acid gas, and carburetted and sulphuretted hydrogen, which ever collect in sufficient quantity to overpower and destroy life. The two first, under the names of Choke Damp and Fire Damp, we have already fully explained, both under those names and that of Suspended Animation. With regard to sulphuretted hydrogen, the best and speediest antidote is atmospheric air, slightly impregnated with chlorine gas, and then given the patient to imbibe.



The use of the Stomach Pump, with the mouthpiece to protect the tube from the teeth of the patient.

POISONOUS BERRIES. — When *young children* are poisoned by vegetable substances, it will generally be found to have been from eating some ripe or unripe berry whose bright colour or tempting look has proved too powerful for the ordinary prudence of their natures. The consequences of such poisonous substances are shown by fainting, sickness, convulsions, insensibility, contraction or expansion of the pupil.

The TREATMENT is almost the same in every case,—emetics of white vitriol or mustard and water, emptying the stomach as quickly as possible; injections or purgatives, drinks of vinegar and water frequently given, and the system roused by sal volatile and brandy in small quantities, while mustard poultices are applied to the feet and sometimes to the spine. See POISONS.

POLYCHRISTUS SAL, OR SAL POLYCHRIST, or Salt of Many Virtues. —A medicine formerly held in great estimation by physicians in biliary and gastric affections. There are two salts bearing the above name to be met with in the medical works of the 18th century, and still to be found in the old Pharmacopœias. The first is the well-known alkaline salt called sulphate of potass, a rough white powder, like cream of tartar in appearance, and which, in doses of 20 grains, was given twice a day in a little water in cases of biliary sickness, and regarded as the best remedy in all such affections, especially when followed by a couple of the pill Rufi. The other sal polychrist, and that which more particularly deserves the title of the *salt of many virtues*, is an article now unknown to the generality of medical men, the professional name of which is "*sulphas potassæ cum sulphure*." or the sulphate of potass with sulphur, a salt which forms the basis of the Harrowgate and all sulphurous waters. The mode of preparing this article is to mix intimately together equal parts of powdered nitre and sublimed sulphur, and then throw small quantities at a time into a crucible made red hot: a violent inflammation instantly takes place, a portion of the sulphurous acid gas combines with the oxygen of the air, to form sulphuric acid, which unites with the potass of the nitre, forming sulphate of potass; the hydrogen combining loosely with another increment of sulphur, which becomes mechanically mixed with the sulphate, forming the product, "sulphate of potass with sulphur." During the combustion, dense volumes of nitrous acid gas are evolved in suffocating clouds;

on this account, the preparation should always be made in the fireplace, that the vapour may ascend by the chimney. The value of this preparation, when reduced to powder, is as an antiscorbutic, in affections of the skin, and other diseases of a strumous habit of body, the dose being from a scruple to one drachm twice a day. The most effectual form of using it, however, is as an artificial Harrowgate water. See HARROWGATE WATER.

POLYGALIC ACID.—An acid obtained from the snake root, but of little use in medicine.

POLYPUS, A, is generally a tumour of a pyramidal shape, and is a species of zoophite, appertaining as much to the animal as to vegetable life. A polypus is so named from a popular idea that it has a multiplicity of roots or feet. A polypus is a fungous growth that sometimes manifests itself in different parts of the human body, most frequently, however, in the nose, the uterus, and vagina; the nose being of all others the most frequent ocality in which it is found.

Polypi are of two kinds, the inoffensive nd the malignant. Of the first there re three kinds, the *fleshy* polypus,—red, oft, and free from pain, like a piece of esh hanging down from the part; the *gelatinous*, a soft, semi-transparent tumour, ellow in colour; and the third, the *hyatid* polypus, which assumes the form of cyst, and may burst at any moment, nd discharge its contained fluid.

The malignant, or cancerous polypus, hard, scirrhous, and painful, and is only with few exceptions) found in old people, r those somewhat advanced in life. This ariety is sometimes called *fungoid* olypus.

The CAUSE of this disease is quite nknown; theories have been advanced o show that it proceeds from some ereditary taint of the blood or fluids of he body, and that, like cancer, it depends n the presence of fungoid animalculæ in he blood; but as yet no reliable explanaion has been advanced to prove on what his fungous growth really depends.

The TREATMENT of polypi, whether in he nostril, vagina, or uterus, consists in imple extirpation, the *speculum* being used in some situations to show their elative positions; a ligature is then hrown round their peduncle, or root, and ied, and when the growth has been hrown off by sloughing, the base or root s cicatrized with nitrate of silver. Some surgeons simply cut off the polypus with the straight or curved scissors, and arrest the bleeding by styptics; but as this is a disease so purely surgical, it is unnecessary to say more on the subject, as only a surgeon can treat it.

POMEGRANATE.—The fruit that bears this name is of an apple shape, and although a native of Northern Africa, is cultivated in many parts of the East, particularly in Persia, where it becomes an article of very great consequence to the inhabitants, who use every part for some wholesome or useful purpose. The pomegranate, besides being a delicious fruit, is used for the manufacture of a wine highly esteemed for its flavour and richness, and of which even Solomon speaks with admiration. The seeds, on account of their astringency, are employed to give flavour and medicinal effect to wine, in which they are macerated; while the rind, also used for its astringent property, is employed in the tanning of the skins known as morocco leather. The only part of the fruit used medicinally is its bark or peel, the *cortex granati*, and that is generally administered in the form of a decoction or infusion. Though sometimes given as a febrifuge, it is as an astringent in relaxed sore throats, diarrhœa, urethral discharges, and certain conditions of the kidneys and bladder, that the most benefit is obtained from this article. To give tone to the bladder, and correct the irritation of the water in paralysis of that organ, the *uva ursi*, or whortle berry, and pomegranate bark, made into a decoction, is often employed with very great success.

POMUM.—An apple, which see.

POMUM ADAMI.—Adam's Apple is the name given to the sharp protuberance observable in the throat of men, and is formed by the union of the two thyroid cartilages, the external protection of the larynx, or organ of voice. These cartilages being much smaller in females than in males, accounts for the apparent non-existence of the Pomum Adami in women.

PONS CEREBRI AND PONS VAROLII.—The bridge of the brain, or the bridge of Varolius: a number of delicate strings or threads, situated at the centre and base of the brain, and uniting the cerebrum with the cerebellum, and given the latter name from the anatomist Varolius, who first minutely described the part, which is sometimes called the commissure of the little brain.

POPLAR TREE (the *Populus Tremula*).—The only species of this well-known tree used medicinally is the above, known as the shaking ash, or aspen, whose leaves in the calmest day are always in motion. The virtues of the bark of this tree, when peeled off in the spring, depend on the large amount of *salicin* and *populin* it contains, the active principle of both the willow and the poplar being combined in this wood. On this account the bark has been substituted for cinchona and quinine, and at all times, in the form of infusion, makes an excellent substitute, both as a febrifuge and a tonic. The powder of the bark of this tree was once considered serviceable in paralysis, falling sickness, and strangury; while the juice of the bruised leaves was highly esteemed for its efficacy in dimness of sight. It is, however, now never used in medicine.

POPLITEAL ANEURISM. — An aneurism of the artery of the ham, or the hollow in the bend of the knee. See Aneurism.

POPLITEUS.—The ham. Also the name of a muscle of the back of the leg, which rises from the *femor*, and is inserted into the lower part of the *tibia;* its function is to bend the leg backward on the thigh.

POPPY.—The *Papaver somnifera* of the Pharmacopœia. The two principal varieties of the poppy used in medicine are the *red* and the *white:* both belong to the Natural order *Papaveraceæ.*

The poppy from which opium is chiefly obtained is a native of Asiatic Turkey and the East Indies, where, as we have shown under the head of Opium, the drug in question is chiefly obtained. The medicinal qualities of the poppy are narcotic, anodyne, and sedative. The parts of the plant employed in medicine are the capsules, or poppy-heads, and the petals of the red poppy; and the preparations employed in practice, the extract and the syrups of the white and red poppy. The extract (*extractum papaveris*) is prepared by boiling the bruised poppy-heads in water for some time, straining the liquor, boiling again, and then evaporating the residue to the consistency of an extract. The dose, either made into pills, or rubbed down with water and sugar for a draught, is from 3 to 8 grains. The common syrup (*syrupus papaveris*) is made either by boiling poppy-heads for a certain time in water, straining the liquid, adding sugar, and boiling again, till all the scum has been removed, or it is made by rubbing down a certain proportion of the extract of poppy in hot water, adding sugar, and boiling till the whole becomes a syrup of proper thickness. The latter is the manner in which the syrup of poppies is usually made in the shops, and as each chemist generally makes it according to his own idea of a proper strength, it is on this account that so many accidents occur with young children. The syrup, when made with the extract, is by far the best preparation, the safest to administer to children, and the one in which the dose can be most accurately defined. The usual quantity of extract employed is 4 grains to every ounce of the syrup: this proportion would give from 2 to 4 drachms as the dose for an adult, repeated two or three times a day, and from 20 drops to half a teaspoonful for an infant a year old, or a teaspoonful to a child of from three to four years of age. This syrup is chiefly employed as a sedative, and very improperly used by nurses—and often to a dangerous excess—to still or stupify restless or crying children. The symptoms caused by an overdose of syrup of poppies are the same as those caused by opium. See Poisons.

THE POPPY—CAPSULE AND FLOWER.

The syrup of the red poppy (*syrupus rhœados*) is only used professionally to colour and sweeten mixtures, and is made by boiling the scarlet petals of the common field poppy in water, and, by the addition of sugar, converting the decoction into a syrup: from 2 to 4 drachms are usually employed to sweeten a 6 or 8-ounce mixture, and impart to it a rich red colour.

The most general use to which poppy-heads are put is that of fomentation: the heads or capsules being broken and boiled for some time in water, flannels dipped into the strained liquor are applied as hot as can be borne to the parts affected. When a particularly soothing effect is desired, it is customary to use camomile flowers with the poppy-heads. See FOMENTATIONS. The seeds of the white poppy are bland, pleasant, and perfectly harmless when eaten; they contain a large quantity of oil when fresh, which is used in the arts on account of its purity, especially for mixing with paint.

POPULIN.—The active principle of the poplar, and which, on account of its intense bitter, is given as a stomachic, tonic, and febrifuge.

PORK.—A reference to the article FOOD, and particularly to the table of the relative digestibility of different foods, will show the reader that, of all animal flesh taken as aliment, fresh pork takes the longest time to be acted on by the gastric juice and digested; hence to the invalid, or person affected with a debilitated stomach, pork is the most improper article of diet he can consume. When moked and properly dried, as in the rm of bacon or ham, it becomes, however, an article not only beneficial as a od, but useful as a medicine, for, when aken at breakfast, it often acts as a irect stimulant to a debilitated stomach. See FOOD, INDIGESTION.

PORRIGO.—A scurf on the head; a ustular eruption of the scalp; a species f scald head. See SCALP, and SKIN, DISEASES OF.

PORRUM ALLIUM.—The Leek. See ONION, and LEEK.

PORT.—In a medical sense this is the most useful of all the wines consnmed n this country, and is valuable both as a tonic and a stimulant. Besides its alue as an internal remedy, port wine is often employed externally as a gargle n relaxed sore throat, and is an important article in the treatment and cure of *ydrocele*, or dropsy of the scrotum, and other collections of fluids in these parts, port wine and water being injected into the sac as soon as the diseased collection is drawn off, the object being to excite such a degree of inflammation in the distended membrane, that when the wine and water is in its turn allowed to escape, the two sides of the sac or cyst may grow together, and thus prevent the possibility of an after collection. See WINE.

PORTER.—What the schiedam is to the Hollander, vin ordinaire to the Frenchman, and poteen to the Irishman, porter is to the Englishman, and may be justly characterized as the national beverage of this country. Porter should consist of a simple decoction of malt and hops, fermented and kept for some time to prepare it for use.

The special difference between porter and ale consists in the former containing a larger proportion of hops than that allowed for ale. On this account, from containing a larger quantity of bitter principle, porter becomes an article of much more value and importance to the medical man than ale, both as a tonic and stomachic; while as an ordinary beverage, there is no article that, as a general rule, agrees so well with the English constitution, and is at the same time strengthening, nourishing, and wholesome.

When a tonic and stimulating effect is desired, it is customary to employ a more potent beverage than porter. When such is the case, stout is the article prescribed, which, from containing a much larger quantity of malt, with an increase of hops, becomes in many cases a better auxiliary remedy than even wine. Porter is one of the best beverages the nurse can take while suckling, as it adds materially to the abundance of the lacteal secretion, while supporting her strength better than any stimulant whatever. See STOUT.

PORTIO DURA, AND PORTIO MOLLIS.—The names given by anatomists to the facial and auditory nerves, the early anatomists regarding both as mere divisions of one nerve—the 7th pair; one branch, being of apparently firmer texture, they called the hard portion (the *portio dura*), while its opposite branch, having what seemed a contrary property, was named *portio mollis*, or the soft portion.

They are now, however, regarded as two distinct nerves, called respectively the facial, or 7th, and the auditory, or the 8th pair. See NERVES.

PORTUS BILIARIUS, OR THE GATE FOR THE BILE.—A channel connecting the liver with the common biliary duct.

PORUS.—A pore; a minute orifice; as the pores of the skin; the exhalents or mouths of the minute vessels, which carry from the surface of the body the watery particles of the blood, in the form of sensible and insensible perspiration.

POSSET.—A term once in general use for any warm, stimulating, or medicinal beverage, most frequently made with ale, sugar, and spice, or with wine and eggs, flavoured with lemon, borage, mint, or rosemary; or a posset might be made with milk slightly curdled with old ale.

POSTURE, THE INFLUENCE OF, ON THE BODY.—The fact that the flow of blood to the head is favoured by the recumbent and retarded by the erect posture, suggests the treatment to be adopted in cases of disease of the brain. Where there is high arterial action, the head should be raised; where there is much debility, the body should be placed horizontally. Such changes of posture are often attended with the best effects: thus, instances are recorded in which pain, intolerable in the horizontal posture, has been at once removed by assuming the erect position. When it is desirable to produce a sudden and strong effect on the system by the abstraction of blood, the patient should be placed in an erect posture, for the heart soon loses the power of sending blood upwards to the brain, and fainting follows as a consequence.

POTASS (popularly called POTASH).—One of the fixed alkalies, obtained from the incineration or burning of all vegetable substances, and so named from having been originally prepared in large iron pots or cauldrons. The potass, when first obtained in the state of an impure ash or salt, is called kali, or kelp, and in that form is used in the manufacture of glass, and when boiled with fish oil or grease, makes a common soap. When the first process of purification has been completed—that of burning it to a red heat—it is called pearlash. Though called an alkali, potass is in reality only the oxide of a metal, the base of the salt being a metal known as *potassium*, which, being combined with oxygen, becomes the alkali potass, or potassa. The salts of potass form one of the most useful set of drugs in the Pharmacopœia, producing *almost* every action on the system which *the body is* capable of experiencing. Potass unites with most of the mineral and vegetable acids, yielding valuable salts. The principal acids with which it unites, however, are carbonic acid, sulphuric acid, tartaric acid, acetic acid, and nitric acid.

CARBONATES.—The union of carbonic acid and potass gives us three salts—the sub-carbonate, carbonate, and bi-carbonate. The ***sub-carbonate*** of potass, formerly called the salts of wormwood and salts of tartar, is a very corrosive preparation, and so deliquescent, or prone to become watery, that it cannot be exposed for many minutes to the air without becoming liquid. It is seldom used as an internal remedy, except in the popular recipe for hooping-cough, in which 30 grains of salts of tartar and 15 grains of cochineal are boiled in a quartern of water, sweetened with sugar, and from a teaspoonful to a tablespoonful given two or three times a day, according to the age of the child.

Carbonate of Potass.—This preparation is never used internally, unless in its dried or burnt state, when, all the water of crystallization having been driven off, a strong alkaline crust is left, which, when powdered, is known as the *burnt carbonate of potass*, a very useful article in acidity of the stomach, and many conditions of dyspepsia and indigestion. The dose, either alone or combined with rhubarb or colombo, is from 5 to 10 grains, and may be either given in a pill or made into a powder.

Sesqui-, Bi-, or Super-carbonate of Potass.—This is the article universally sold by chemists as the carbonate of potass, though chemically receiving the prefix of sesqui- or bi-carbonate. The first name, signifying one quantity and a half, was originally given to this salt to show that it contained *one and a half* atoms of carbonic acid instead of the *one* atom contained in the simple carbonate. Modern chemists, however, having discovered that its true proportion was *two* atoms of acid to one of potass, have named it bi-carbonate. In all cases in this work where the carbonate of potass is referred to, this is the article indicated, as the simple or sub-carbonate of either alkali is never kept for medical purposes by chemists. This preparation is employed medicinally as an antacid, diaphoretic, or a saline, in effervescing draughts or mixtures, the dose being from 10 to 20 grains: 20 grains of bi-carbonate of potass will require the same amount of citric acid to neutralize it, and 15 grains of tartaric acid.

Sulphates.—Compounds of sulphuric acid and potass. Of these there are but two preparations used medicinally—the *sulphate of potass*, formerly called *kali vitriolatum*, and *sal polychristus*, and employed as a purgative in doses of 2 drachms, and as a deobstruent in repeated doses of 10 and 15 grains; it was, however, in biliary affections that this salt was most esteemed. See Polychrist, Sal. It is now only used as a mechanical drug, to separate and intimately combine the opium and ipecacuanha in the Dover's powder, where it forms an eighth of the whole bulk.

Super-sulphate of Potass.—This preparation, being stronger in its proportion of acid, is consequently more active in its operation, and is given as a refrigerant and cooling purgative in cases of hemorrhage, in combination with infusion of rose leaves and sulphuric acid: the dose is from half a drachm to 2 scruples.

Tartrates, or compounds of Tartaric Acid and Potass.—There are only two preparations of this name used medicinally, the *tartrate of potass*, a cooling purgative, said to counteract the griping of senna, when combined with an infusion of that drug. The adult dose is half an ounce.

Super-tartrate of Potass, or *Cream of Tartar.*—The great insolubility of this salt materially interferes with its use as a medicine; it is chiefly employed as a cooling diaphoretic drink in cases of fever. See Drinks.

Acetate.—This is a compound of vinegar and potass, and under the name of *acetate of potass* forms a very useful and important medicine, being specially serviceable in dropsies and visceral obstructions, when given in doses of 30 grains, three or four times a day.

Nitrate.—This preparation is a compound of potass and nitric acid, and known as *nitrate of potass, nitre*, or *saltpetre*. It is used as a diuretic, diaphoretic, and astringent; the dose being from 3 to 8 grains. See Saltpetre, and Nitre. There are several other preparations of this valuable salt, such as the *sulphuret of potass*, an article containing sulphuretted hydrogen, and used in skin diseases and scrofulous enlargements (see Sal Polychrist); the *iodide of potassium* or *hydriodide of potass;* and the *hydrate of potass*, an external application.

All the preparations of potass should be kept in closely stoppered bottles, as they are prone to deliquesce or become liquid if exposed for any time to the air.

POTASSA FUSA, or CAUSTIC POTASS.—A preparation used by surgeons to form issues, destroy the cuticle, or excite a new action in a diseased part.

POTASSÆ LIQUOR, or LIQUOR OF POTASS.—A powerful caustic solution, a liquid potass; and sometimes given in doses of three or five drops in milk or lime water once or twice a day, in some affections of the kidney and bladder.

POTATO, THE.—As a dietetic agent the potato is one of the most valuable vegetable products we possess, and ranks only second in importance as a food to the grains of wheat, barley, and oats. The potato, a native of America, belongs to the *solanaceous* order of plants, and was first introduced into this country about the middle of the 16th century. Chemically, the potato contains, for its proximate principles, starch, sugar, albumen, gluten, fat, gum, salts, and cellulose; thus yielding all the elements of heat-forming, and *most* of those of the flesh-forming foods: on the latter account, a much larger quantity of the potato is necessary to support life in a state of working health than is requisite when either of the three cereals is used as an aliment. The English labourer, with his hunch of dry bread and fragment of hard cheese, or the Scotchman with his bowl of thick porridge, is stronger, better able to perform a hard day's work, and can resist disease better, than the Irish workman, who consumes his ten pounds' weight of potatoes during his term of labour.

The potato, though an excellent food, an admirable adjunct to every dietary, and a preventative against scurvy at sea, is yet an article on which the human body cannot alone be supported for any length of time in health or strength, even when consumed in an increased proportion. A *hundred* pounds in weight of potatoes are only equal in sustaining properties to *thirteen* pounds of wheat. The potato contains a large proportion of starch or *fecula*, which, prepared in various ways, and sold under different names, makes a good substitute for puddings, custards, and other farinaceous foods, though far inferior in quality to the potato in its entirety.

To the corpulent, or those anxious to reduce their bulk, the potato is one of the most objectionable articles that can be consumed, and as all the starch not expended in effecting animal heat is laid up in the system as fat, it should be strictly avoided. See Food.

POTION.—Any liquid medicine, a draught, something swallowed at once.

POULTICES.—These external aids to the surgeon form a series of most valuable agents, not only in the treatment of local disease and injuries, but as grateful emollients and sedatives, often of the greatest benefit and comfort to the patient. Poultices are of five kinds,—the simple warm emollient, the sedative, the stimulating, the blistering, and the corrective or antiseptic poultice.

Warm Emollient Poultices.

The great object desired in all the poultices belonging to this class is warmth, steadily and evenly applied; and as there is really no virtue in any article used for the purpose, that substance or material makes the *best* poultice which will maintain, for the longest period, *heat* on the part; the sovereign quality of all these poultices residing solely in the warmth applied. Of all articles suited for an emollient poultice, the *spongio-piline* is the best. This material, made of shreds of sponge and felt woven together on a ground of Indian rubber, can be procured in pieces of any length or size, and merely requires its pile or loose surface to be soaked in hot water, squeezed to discharge the excess of moisture, and applied face downward on the part, the impervious nature of the upper surface preventing the escape of the heat by evaporation. A piece of oiled skin applied over all will still further secure the heat. Evaporation may be entirely prevented by previously cutting the pile away from the edges in such a manner, that, when secured, the india-rubber coating shall overlap and shut in the part covered.

Bread and Water.—This kind of poultice is too often made in a manner at variance with all the known laws of evaporation, either by pouring hot water on crumbs of bread, or on pieces of bread, and then breaking them down with a spoon or a fork. The proper method of making such a poultice is to cut a slice of bread from a loaf about half an inch thick, remove all the crust and hard edges without cracking the crumb, which, with a sharp knife, should be squared to the size required. The piece is next to be placed in the middle of a slip of muslin laid in a soup plate, then carefully covered with hot water, the rest of the muslin laid over the top, and another plate placed over all to keep in the heat for the space of two or three minutes, till every part of the bread has become charged or swollen by the water, which is to be poured off by taking up the two plates together, when a small amount of pressure will expel the excess of water without breaking the poultice, which is then to be carefully lifted by the ends of the muslin which encloses it, and laid on the part, a piece of oiled skin and a bandage being added to keep in the heat and secure it in its place.

Linseed Meal.—This substance, from the quantity of gum and oil it contains, makes an excellently soft and agreeable poultice, the former serving to retain the heat a long time, and the latter to keep the surface soft. As much meal as is requisite is to be put in a basin, a hole made in the centre with a spoon, and as much hot water as may be deemed necessary poured at once into it; the whole is then to be quickly and carefully stirred till a smooth and intimately mixed mass of the consistency of porridge is obtained. Should too little water be used, the mass will be hard and lumpy, and cause much delay and trouble in the amalgamation of the water subsequently added, whereas if the quantity is rightly guessed at first, the poultice will be of one uniform consistency. It is then to be spread about an inch thick on linen or flannel, its surface greased with a little lard, and laid on the part.

Flour and Oatmeal Poultices are made in the same way, only they require to be more largely greased than the linseed meal, to prevent their sticking to the skin when removed.

N.B.—In making all these poultices the water should be nearly boiling, to allow for the loss of heat during the time of their preparation, so that when applied they may be as warm as the patient can bear them without inconvenience.

The objects for which all the above forms of poultice are employed are, first, to soften and relax the cuticle; secondly, by the warmth to soothe the part and afford ease; and thirdly, by the continued heat to mature abscesses, or what is popularly known as drawing an abscess to a head, heat having the property of facilitating the change of the effused blood into pus, when it is desirable to effect that change.

Sedative Poultices.

The object for which poultices of this class are chiefly used is to subdue pain of a local character, as in sprains, bruises, contusions, or accidents generally. Poultices of this nature are usually made by preparing a strong decoction of camomile flowers, or camomiles and poppy-heads, and then filling a small bag with camomile flowers, and after soaking it in the hot decoction, applying it to the joint or part affected, and repeating the application as soon it has become cold; or a thick slice of bread may be enclosed in a bag, and immersed in the same manner in the hot decoction; or crumbs of bread, linseed meal, or oatmeal, may be used in the same way, by first making them into a paste. The first plan, however, is the simplest and the cleanest mode of using this kind of poultice. Hemlock and monkshood are also occasionally used for the same purpose, the herbs being first boiled in water, and the hot liquor ab-orbed by bread or linseed meal as above, and applied either in a bag or between olds of linen. An opium poultice may be mployed in the same way, by previously issolving the solid opium in boiling water.

STIMULATING POULTICES

re employed in cases of rheumatism, aralysis, lumbago, and chronic affections f the joints, their object being to excite healthier action in the part, and, by a pecies of mild counter irritation, produce beneficial change. Sometimes they are sed to rouse a patient in a case of thargy, and draw the blood from some nternal organ. Stimulating poultices are sually made with a mixture of mustard nd flour, in proportions according to the timulating effect desired; thus, one table-poonful of mustard with three of flour, ixed together before being wetted with ot or cold water, or else one spoonful of ustard to two of flour, or equal parts, hich is the strongest form in which this ind of poultice is used. Sometimes, to dd to the stimulating properties of this oultice, a strong infusion of horseradish s employed instead of water for the pur-ose of mixing the mustard and flour into paste. These poultices should be spread n a flannel, and where the skin is very ensitive, a piece of thin muslin may be nterposed between the poultice and the uticle. The time that a mustard poultice hould be retained must depend upon the trength of the poultice itself, and the bject for which it is employed; from ten o forty minutes, however, may be re-garded as the extreme points of duration. arrots are occasionally used as stimula-ing poultices to ulcerating surfaces, but heir efficacy is very questionable.

BLISTERING POULTICES.

Mustard is the only article employed for this purpose, and then the mustard is used simply with water, and without flour; it should be made thick, spread on flannel, have its surface covered with fine muslin, and then applied to the skin. Some medical men mix euphorbium powder with the mustard, to increase its blistering properties, but this addition is seldom required. A mustard plaster generally requires about fifteen minutes to rise, and should be removed directly the vesication takes place; the blister is then cut, and dressed first with a warm poultice, and lastly with violet powder. See BLISTER.

CORRECTIVE POULTICES.

The purpose for which this class of poultices is employed, is to destroy the fœtid odour of foul ulcers, ill-conditioned sores, and to change the character of the granulations, or of the discharge which exudes from them. The articles chiefly used for this end are yeast, charcoal, chloride of lime, and alum.

Yeast Poultice.—This may be made in several ways,—first, by mixing one or two tablespoonfuls of yeast with the same amount of flour, and then adding enough hot water to make the whole into a smooth paste, which is to be spread on flannel, and laid on the ulcer or sore. Secondly, by mixing four tablespoonfuls of linseed meal with two of yeast, and the same quantity of boiling water, or enough to make a smooth paste, to be applied on flannel. Thirdly, take a thick slice of bread without crust, soften it with boiling water, and then cover the top with fresh yeast, and apply the yeast side to the ulcer; or the yeast may be applied on piline, first made warm and soft by hot water.

Charcoal Poultices.—These are made by mixing charcoal and flour and linseed meal, in nearly equal quantities, in a basin, adding hot water, and stirring till a smooth paste is made, which is to be applied, like the others, on flannel.

Chloride of Lime may be made in the same way, or by mixing the meal with the solution.

Alum Poultices are only used as an astringent in certain chronic inflammations of the eye. This poultice is made by mixing the white of two or more eggs with a drachm of finely-powdered alum: put the mixture between a fold of muslin, and apply it to the eye.

Cold Bread and Water Poultices are sometimes employed, and when such are necessary, they are made in the same way as the hot bread poultice, only substituting cold water; and when cold astringent poultices are required, all that is necessary is to soak the bread in a solution of alum, and apply it cold as often as the poultice becomes warm from contact with the flesh.

POUND (*Libra*).—Sixteen ounces. The word pound was till lately used by medical men and chemists indiscriminately for solids or fluids: the imperial measure, by making the pint twenty instead of sixteen ounces, has, however, interfered with that practice. See WEIGHTS AND MEASURES.

POUPART'S LIGAMENT.—A broad, thin ligament, covering the anterior opening in the pelvis, stretching from the *ilium* to the *pubis*, and so named from the anatomist who first showed its importance and uses.

POWDER (*Pulvis*).—Powders are the simplest and the best form in which medicines can be given, and as regards children, by far the most convenient mode of exhibition. There are very few articles in the Pharmacopœia, whether in the animal, vegetable, or mineral kingdom, but are to be found in some preparation in the form of powder. Formerly it was the custom to reduce the various articles to powder by pounding in iron, stone, or marble mortars, and afterwards passing them through brass, hair, or cloth sieves; since the general introduction of steam, however, most of the articles formerly powdered are now ground in mills; the consequence is that a much finer, a more subtle and impalpable powder is obtained.

Powders are called simple or compound: of the former, rhubarb, jalap, and scammony are common examples; of the latter, the Dover's powder and grey powder are the most familiar instances,—the one consisting of opium, ipecacuanha, and sulphate of potass; and the other, of mercury and chalk. It is a well-known fact in the practice of physic, that the farther the particles of a drug are separated, the more powerfully does that drug act. In this manner, by rubbing one scruple of powdered jalap with two scruples of cream of tartar or sulphate of potass, both of them inoperative in such a dose, the powder, when so mixed and given, will act on the bowels as powerfully as if two scruples of plain jalap had been administered. On the same principle, as we have shown elsewhere, half an ounce of Epsom salts, dissolved in half a pint of water, will act as effectually as an ounce taken in a less proportion. When a number of powders are ordered to be mixed together, and then divided into separate doses, care must be taken that they are *intimately* mixed before separating into different papers. As a general rule, powders should be given in some thick or solid substance, such as jam, honey, treacle, or moist sugar, for if mixed with liquids, the chances are that one or more of the articles will fall to the bottom, and be lost to the patient.

POWERS OF NATURE, THE, in restoring the health of the whole, or the integrity of a part of the body, are almost unbounded, and where the constitution has not been vitiated by a course of immoral living, and there is youth on the patient's side, nature, aided by rest and a temperate diet, is capable of effecting the most remarkable cures. It is, however, in the case of wounds, fractures, and other injuries of the body that the powers of nature, in effecting a cure, are the most remarkable, and may be most confidently depended upon. So energetic is this power, and so vigorously is it called into action on the receipt of any hurt, that unless wantonly interfered with, and ignorantly thwarted by a vicious practice, in almost all cases of wounds and gunshot accidents, the cure may safely be left to nature's own unaided resources. If, instead of irritating the wound by Friar's balsam, corrosive styptics, or other stimulating applications, a simple pledget of lint, wetted in warm or cold water, is laid upon the injury, and the plain water dressing continued, while absolute rest is enjoined on the patient, the recovery will be effected in a much shorter time, and with far less suffering, than if dressed in the opposite manner. In the 16th century, when gunshot wounds were cauterized with boiling oil and resins, to counteract their supposed malignant character, Ambrose Paré, an assistant surgeon in the French army, being unsupplied with any seething oil to dress the wounds of some remaining patients, applied cold water compresses till the usual dressings could be procured. Full of apprehension for the result, he passed a night of mental torture and reproach for what he had done; and, in the morning, dreaded to visit the hospital, lest he should find the men so negligently treated dead or expiring. Instead of discovering his patients hot, feverish, and racked with the agony of their inflamed wounds, he found that each soldier treated with the cold water had passed a quiet night, was cool, cheerful, and his wound looking healthy and free from pain.

The fact was not lost on the young surgeon, and from that time a more natural mode of treatment was adopted with regard to gunshot wounds, and nature allowed to cure herself as often as possible. See WOUNDS.

The power of nature in restoring divided parts, and causing even separated members to adhere, is a fact well known to surgeons. Fingers which have been chopped off, ears cut from the head, and portions of flesh torn out, if within half an hour replaced in their natural position, and retained there by proper applications, and the circulation through the part encouraged by warmth, will in all cases, if proper care has been taken, reunite and become once more a portion of the body. This fact has been repeatedly proved on the human body, and illustrated by numerous experiments on animals. See TALISCOTIAN OPERATION.

When the powers of nature are called into operation, the part should be excluded from the air, simply and lightly dressed, and rest implicitly enjoined, all greasy and stimulating applications avoided, and no more pressure employed than is necessary to secure the retention of the parts.

POX.—An exanthenatous eruption of a pustular character. See SMALL POX.

PRACTICE OF MEDICINE, THE, is divided into that of the physician and of the general practitioner. The general practitioner, sometimes called an apothecary, acts as a surgeon, physician, and as an apothecary or compounder of his own prescriptions. The physician, on the contrary, merely practises in one department of the science, that of medicine, and neither performs operations, attends midwifery, nor in any way interferes manually in the profession. "Practice of Medicine," and "Practice of Surgery," are terms applied to scientific works meant for the instruction of medical students, and as books of reference both for the physician and surgeon, when instruction or authority on some particular point is required.

PRÆCORDIA.—Over or before the heart. A term used by medical men to express the region of the heart, or the thorax on the left side.

PRECIPITATE.—Something thrown down. A term employed by chemists to signify a salt which has been separated from the menstruum, and thrown to the bottom of the vessel. The articles popularly known as precipitates, however, are mineral preparations, and differently prepared. There are two precipitates in common use, the red and the white precipitate.

The RED PRECIPITATE is professionally known as the red oxide of mercury, and when powdered, and mixed with simple cerate, makes the unguent known as golden ointment, used in cases of chronic inflammation of the eyelids, &c., and applied by the poor, when mixed with lard, as a dressing for the heads of children, to destroy the nits and vermin which from neglect infest the hair. It is also used either as a powder or ointment, to suppress the large, watery granulations which spring up in wounds, and which are popularly known as "proud flesh."

WHITE PRECIPITATE is the white oxide of mercury, and in its properties resembles the red, and may be used for the same purposes.

PRECIPITATION.—A process in chemistry when, at a certain stage, an agent is added to a compound or a menstruum, by which a new compound is separated, and thrown down to the bottom of the vessel in the form of a fine powder.

PRECOCITY.—A forced or unnatural maturity either of the body or the mind. The annals of science are full of remarkable instances of male and female precocity: it is, however, believed that the premature development of the mind and intellectual faculties forms but a small proportion of the instances of early maturity compared with the development of the corporeal and animal faculties. It has been found that precocity of the mind is generally attained at the sacrifice of the body, and like an over-forced flower, the clever and intellectual boy, if he grows to adult age, becomes a dull and commonplace man, even should he not lapse into idiotcy; while the unnatural development of animal passions is still more likely to end in fatuity. Parents, in natural pride of their offspring, too often act most injudiciously, and where a child shows early talent, wit, or shrewdness, not only foster, but force and encourage it by displaying their child's abilities on all occasions, and feeding the already too active frame, instead of checking, or keeping, by prudent restriction, the precocious tendency subdued and under control, by a suspension of the mental, and a development of the physical education of the child; in other words, by keeping back all books and study, and encouraging play, exercise, and open air recreations.

PREDISPOSING CAUSE.—The predisposing causes of all diseases are hereditary taint, the mode of life of the patient, and the condition of the body at the time of illness. The predisposing cause, whatever it may be, is the one that precedes the exciting cause, which may be cold, fatigue, excessive heat, infection, or accident. See Proximate Cause.

PREDISPOSITION to disease is that state of the system when, from some cause or series of causes, the body is rendered susceptible to disease; such predisposition depending upon some vitiated condition of the body or fluids of the body, hereditary taint or impurity, as in scrofula, cancer, gout; a proneness to such diseases being handed down from generation to generation, often lying dormant in one generation, and showing itself in the next on the application of some of the many exciting causes. A person may go through life in perfect health, and yet have within him the seeds or predisposition to a serious disease, never developed, from the simple fact that no exciting cause has ever called it into existence.

PREGNANCY.—By this term is understood the development of the ovum in the uterus, or the time that elapses between the first impregnation of the embryo till the full term of its uterine gestation or development, and its expulsion from that organ into the world to carry on a separate existence. The usual period assigned to this process of development is nine calendar months, forty weeks, or 280 days. Few women, however, are always alike in this respect; in some cases the period exceeding that term, in others falling short of it. There are only two diseases that can be mistaken for pregnancy, and those only for a certain length of time, those of dropsy of the abdomen (*ascites*), and ovarian dropsy; from both it may, however, be distinguished by the absence of the round tumour felt after the fourth month in pregnancy, by the swelling being more diffuse in dropsy, and the corresponding emaciation of the body; and by the absence of the morning sickness, the general filling out of the body, and the enlargement of the breasts in pregnancy, and finally by the unchanged state of the nipples, and the absence of *all motion* of the child in the others. The stethoscope, however, will in both cases soon put the fact beyond dispute.

The indications or signs of pregnancy are divided into the general and particular, or the constitutional and local. The most important of the *general signs* are the cessation of the catamenia, the morning sicknesses, commencing after the fifth or sixth week, and terminating about the end of the fourth month; heartburn, flatulence, and painful distension of the abdomen towards evening, demanding the loosening of strings and laces; and indigestion and fastidious appetite, irritability of temper, longings, and fanciful desires. The *particular* or *local signs* are—enlargement of the womb, presenting a round, firm appearance, easily felt above the pubes between the third and fourth months; a corresponding distension of the abdomen; enlarged and knotty feel of the breasts after the tenth or twelfth week, with an itching sensation felt in the glands; the nipples at the same time become more erectile, and stand forward, their pores being enlarged and the organs themselves tender and irritable; the aureola or circle surrounding them becomes darker and broader, while the countenance assumes for a time a careworn appearance, the mouth and eyes are enlarged, the nostrils pinched, and the nose sharp; and lastly, quickening, or the first motion of the child felt by the mother, an event that takes place about the fourth month.

The complaints or ailments of pregnancy are—acidity of the stomach, heartburn, flatulence, and constipation of the bowels (all of these more or less the result of pressure); faintings, or slight attacks of *hysteria;* a varicose condition of the veins of the legs; and piles, from pressure on the abdominal vessels; and towards the end of the pregnancy, frequent cramps of the muscles of the legs and thighs. From the highly sensitive state of the nervous system in all women during pregnancy, and the remarkably susceptible condition of their minds and bodies, pregnant women should avoid all exciting scenes, and be carefully guarded from the witnessing or hearing of any object of disgust or repulsion. They should at the same time avoid all risk of infection, for though they may escape the disease of which it may be the emanation, the child may be seriously affected by it in the womb, and on its birth exhibit all the symptoms;—it is by no means an unusual circumstance for an be born with small pox fully de- the mother having herself en- aped the disease, to which she been some time previously ex- er mind should be kept occupied ossible with healthy, pleasurable heerful but not exciting con- or company, and her eye ed with objects of grace and

t of the pregnant woman should easy of digestion, and support- at the same time simple. She ke as much moderate exercise as th and condition will permit, and d—especially in the later period equent rest in the recumbent n a sofa; go to bed early; to- end of her time, take some por- r breakfast in bed; and in the be careful not to rise too quickly ing position, or sickness, or in- ing may ensue: these directions ularly necessary with delicate sensitive constitutions. Spong- ower part of the abdomen and ith vinegar and water will be h grateful and necessary during onth, while to prevent chafing powder will prove an agent of efit. See WOMB.

ATURE BIRTH OR LA- -After the seventh month, the ery easily excited to put on its ex- tion from very trivial causes, and reason great care should be taken nale to avoid any sudden jar to n, or any strong emotion to the he stepping from a single step down stairs, the inconsiderate f young wives in jumping from a lifting some heavy piece of fur- en the turning of a bed, will in stances bring on a premature d thus all the previous care and is thrown away, and the life of nt and mother jeopardized by a e birth, for in such cases there tly very serious hemorrhage. vil attending this kind of labour f it happens with a first child, great probability that such a e may occur at the same time in regnancy, without any accident t.

ature birth is a labour between th and ninth month, or at any g the last seven or eight weeks of ancy. In cases of a malformation lvis, or pelvis and spine, but ly where the inner margin of the pelvis is unnaturally small or narrow—too confined, in fact, to permit the passage of the fœtal head,—it becomes the duty of the surgeon, who has previously satisfied himself on this point, to *produce* premature labour, so that the head, before becoming fully developed, may pass through the pelvis, and, whether dead or alive, the fœtus be expelled, and the womb relieved of its burden.

PREPUCE.—The loose integument in males known as the foreskin. The part removed in circumcision.

PRESCRIPTION.—The paper which the physician gives to his patient, on which he has written down, in abbreviated Latin, the drugs which the invalid is to take to relieve his symptoms and effect a cure of the disease, or at least to commence that desirable process. The practice of writing prescriptions in Latin has long been objected to as a source of great risk and danger, from the misconception of the meaning by the dispenser, or the half-informed lads and boys so often left in trust of their masters' shops, as chemists' assistants and apprentices. Not only is there considerable likelihood of a mistake occurring in respect of the real article meant, and the quantity of it ordered, from the contractions used in almost every word, and the similarity of some of the symbols employed to indicate weights and measures, but often more danger arises from the slovenly and execrable writing in which prescriptions are indited. Frequent attempts have been made to reform this system of writing prescriptions in Latin; or at least, if it was thought necessary to keep from the knowledge of the patient the nature of the medicines prescribed, that at all events the directions should be written intelligibly. But though the good sense of many physicians has prompted them to pay more attention to the writing of their prescriptions, and some few now always add the directions in English, professional prejudice has hitherto resisted anything like a general and satisfactory reform in the matter.

The great art of prescribing is to employ as few ingredients in one composition as possible, and at the same time to be careful that one drug shall not counteract the operation of another, or by chemical decomposition destroy the efficacy of the whole; a mistake of this nature might render what was meant to be a dry powder a wet, clammy mass, or convert a red mixture into a green one. As a specimen of medical prescriptions and their contractions, we append the two following examples:—

℞. Liq. potassæ . . . . . fl ʒ ij.
Magnes. calc.. . . . . ʒ j.
Liqu. calcis . . . . . fl ℥ vjss.
M. bene simul. Capiat æger cochleare mag. bis in die ex poculo jusculi bovini.

(Translated.) Take of—
The liquor of potass 2 fluid drachms.
Calcined magnesia . 1 drachm.
Lime water . . . 6½ fluid ounces.
Mix well together. Let the patient take a large spoonful (table) twice a day in a cup of beef tea.

(The above is a very useful antacid mixture in cases of obstinate acidity of the stomach, attended with heat or scalding of the water.)

℞. Pulv. rad. granati cort. . . ℥ss.
Pul. semin. santon. . . . . ʒij.
M., et divide in chart. vj. Signa. Sumat unum omni semi-horâ ad sextum vicem.

(Translated.) Take of—
The powder of the bark of pomegranate root . ½ ounce.
Powder of wormwood seed . . . . 2 drachms.
Mix, and divide into six papers. Direct or sign. Let him take one (powder) every half hour till the sixth succession.

(A remedy for tapeworm, to be followed by a purgative after the last powder.)

PRESERVED MEATS.—Of the value of preserved meats to the soldier, emigrant, or colonist, it would be difficult to speak in too enthusiastic a style. As a warder off of scurvy on long voyages, as a tonic to a system become relaxed by inaction and a long continuance on one kind of dietary, and as a positive luxury to the invalid, preserved provisions are of immense importance.

Preserved foods are prepared in two ways, one by dessiccation after partial cooking, or drying up all the juices in the articles, and then, by the process of compression, forcing them into the smallest possible space. In such a condition as this, all the juices, the cause of fermentation and decay if allowed to remain in the article, having been removed by pressure, they will keep for almost any time; it is only necessary to throw a small portion—an inch or two, perhaps—of the dried cake into a sufficiency of water, to obtain, after a few minutes' boiling, a meal of hot soup, containing the usual vegetables, to which any amount of preserved meat may be added, so as to insure a hot, grateful, and abundant repast of fresh provisions *in the* space of a few minutes. So closely
are the preserved vegetables
and so admirably is the mixture
combined, that the vegetable
an army may be carried in
hand.

The preserved animal meat
pared the same way. The
meat being selected is first
cooked, then compressed,
lastly, grated into a rough pow
packed in canisters and exc
the air, will keep for many
article, when made with beef
pemmican, and is, to travellers,
and emigrants, an invaluable
and can either be added to
vegetables, or infused in boilin
a short time, when it yields
excellent beef-tea; while in de
ations, where neither fire nor
boil water can be procured, a
fuls of the *pemmican*, sprinkled
buttered biscuit, or eaten like
late, will not only afford an ex
a highly nutritious meal. So
the concentrated strength of *pe*
be formed when it is stated
pound canister contains the
sixteen pounds of fresh beef,
teaspoonfuls, or one ounce, be
lent to a pound of solid m
provisions are also prepared,
and roasted, containing all
juices and moisture; and tem
of stewed and roasted game,
other items of animal luxu
partaken of years after they
cooked, and that, too, with a
ness and flavour peculiar to e

These kind of dainties are
enclosing the cooked articles
isters, from which all air h
hausted, and then, by solderi
lid, hermetically sealing the
the vessel from all access wit
sphere till opened, when the
found as fresh as if just cooke
merely requires the applicatio
prepare a dish as perfect in all
if for the first time cooked
this admirable process of
sealing, cooked potatoes, milk
all kinds of useful but other
able articles can be procured
which, where young childre
cerned, and on a long voy
articles of the utmost import
incalculable assistance to the

The meat biscuit, or amm
cuit, is, perhaps, one of the m
forms in which prepared fo

This biscuit, made in the usual ' fine flour, *pemmican*, or some l animal fibre, or concentrated intimately mixed together, is it into circular cakes, and baked ts. With a few of these con- d portable articles in his knap- tin can that will do for drinking- aucepan, an explorer may trust ' weeks in the scrub or moun- no fear of hunger or starvation. tion of meat in each biscuit is d that each one is equivalent ınds of animal food. Half a eaten in the ordinary manner, ıfficient aliment for a strong twenty-four hours, while, if he fer a rich soup, a little water ıis can, to which a few frag- ıis biscuit are added, will, in our, supply it to him. The ıtage of the *pemmican* and am- biscuit over all other kinds of neats is, that the first may be e in a tin box, like chocolate, ter in the pocket or knapsack, ır of injury from exposure to c air.

JRE is both a curative agent e of injury and disease. When long continued in one particu- t is certain to beget callosity, r abrasion. The corns and the feet and toes are examples from tight shoes. The fatty o often occurring on the neck, or back, result from eights on those parts; and the ticle and sloughing cellular bed-sores proceeds from the the body on the bed continued weeks in one position. The ' tight lacing in delicate and nales predisposed to scrofula is e cause of consumption. The the womb, or the contents of on the great venous trunks of or upwards and backwards on h and bowels, is the cause of instance, and of the heartburn, and constipation which accom- ancy in the other.

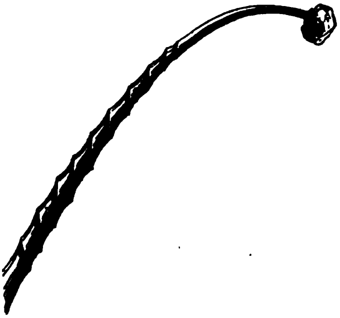
rative agent, pressure, when for a certain time on a chronic swelling, especially if accom- ı friction, acts as a stimulant, e adjacent absorbents to take ed matter. Pressure applied ng vessel, by checking the cir- the point compressed, causes on of a clot, and the cessation of the bleeding. Pressure, also, is principally employed in rickets, diseases of the spine, and other malformations, as well as in the cure of *prolapsus*.

PRICKS WITH THORNS, NEEDLES, NAILS, ETC.—Whatever may have been the articles which have passed into the flesh, pricks are always extremely painful, the amount of pain caused often having no proportion with the insignificance of the article causing the hurt. This arises from pricks being punctures; and all punctured wounds or stabs are more painful and serious than incised wounds or cuts. If the prick is caused by a needle, thorn, or spicula of a leaf, which is broken in the flesh, the cuticle above the spot should be divided with the point of a lancet, and then pressure made below with the fingers in the opposite direction to which the article has penetrated, so as to force it upwards, when it may be caught by a pair of tweezers, or the point of the lancet, and so extracted. When, however, it is too deep to be so removed, the part is to be poulticed with hot bread and water, repeatedly changed, and if the place is very painful, a Dover's powder should be taken at bedtime. It is sometimes necessary to cut through the cuticle entirely before the poultice can effect the removal of the article, but in general, the scarifying of the skin above the prick, and a few poultices, will extract the irritating object. When the wound has been caused by a dirty or rusty body, the frequent poulticing is even much more necessary. Sometimes suppuration follows such a wound; in which case the suppuration must be encouraged till all impurities have been thrown off, and the puncture then healed in the usual way.

PRIMÆ VIÆ.—The primary, first, or chief passages or ways. A term used by the old anatomists to signify that portion of the alimentary canal from the pyloric outlet of the stomach to the *caput cœcum coli*, or blind head of the colon, and embracing the duodenum, ilium, and jejunum, or the small intestines; the rest of the canal, from thence to the anus, being understood as the *secundæ viæ*, or second ways. The latter term, however, is quite exploded, and physicians and medical men use the term *primæ viæ* to signify the whole alimentary tube, and when directions are given to attend to the state of the *primæ viæ*, attention to the state of the stomach as well as the bowels is implied.

PROBANG.—An instrument used to remove obstructions from the gullet. A probang is a thin length of whalebone, with an oblong or circular pad of sponge securely attached to its thinnest extremity. Being extremely supple, it easily adapts itself to the curving line of the mouth and gullet. If the obstruction in the throat is large, the sponge may be expanded by moistening it before using the instrument. Sometimes the probang is used as a mop to cleanse the fauces and pharynx in chronic affections of those parts, in which case the sponge extremity is moistened in a solution of chloride of lime, a weak solution of nitrate of silver, or other stimulating application.

The use of the probang in cases of suffocation from the lodgment of pieces of meat, potato, or other vegetable, is so self-evident as hardly to need explanation. The head of the person should be bent back over a chair, and the probang pushed along the roof of the mouth till its sponge reaches the back of the pharynx, when it must be made to enter the œsophagus, or gullet, at the entrance of which the obstruction is almost always lodged, when a slight pressure will send it past the constriction.



THE PROBANG.

PROBE.—An instrument, generally of silver, made like a large bodkin, and used by surgeons to test the depth and direction of a wound. Being made of silver wire, probes are easily bent into any shape, according to the course of the wound. Bayonet and sword wounds being generally large as well as deep, the finger often becomes the best and most accurate of all probes, especially when there is fear of a fracture or splinter of the bone. In probing gunshot wounds, to find the course and situation of the ball, the probe is of great use, its rounded point coming on the hard, unyielding metal, and indicating exactly where it is situated. Probes are sometimes made of steel, with a groove in the side for the point of the knife to run in; but such implements are usually called Sounds, which see.

PROCESS.—A name given by anatomists to any sharp, blunt, irregular, or flat projection from a bone, or any smooth and peculiar surface appertaining to a bone. The best and most familiar examples of a process are the angular projections from the spinal column, each bone having two or three, the spinous, transverse, oblique, and articulating processes. The bones which have the greatest number of processes are the ethnoid, sphenoid, and temporal. Processes in general serve the purpose of affording attachment to strong muscles.

PROCIDENTIA UTERI, OR P. ANI.—A falling *out* of the womb or the bowel, contradistinguished from a *prolapsus* of either part, which is a mere giving way, or falling down. See PROLAPSUS.

PROGNOSIS.—A prognostic, a foreshadowing or foretelling an event. A term used in medicine to explain the art or system by which the physician is enabled, at difficult stages of a disease, to predict a favourable or unfavourable termination to the case. A prognosis is capability of prognosticating the end of a disease from a close attention to the patient's symptoms and condition, as a diagnosis is the art whereby he is able to distinguish one malady from another.

PROLAPSUS.—A falling down of any part of the body, though the term is chiefly confined to the womb and the extremity of the bowel—the terminal portion of the rectum. Some surgeons use the terms *prolapsus* and *procidentia* as synonymous words, but this is a great mistake, particularly as regards the uterus, the latter being a worse and more complete form of the first accident, the one being a *falling down*, and the other—*procidentia*—a falling out, or *protrusion*.

PROLAPSUS ANI is a very common misfortune with sickly or scrofulous children, and especially those affected with worms. Such a disease is rather indicative of great physical relaxation than any organic disease; the bowel in children so affected, on the slightest alarm, tears, or excitement, falling down, blocking up the anus, or protruding beyond it

This is particularly the case on every attempt to empty the bladder or bowels, necessitating the instant reduction of the projected part before the bowels can perform their natural operation. Independent of general debility as the cause of this complaint, it is often encouraged, if not actually produced, by a very reprehensible practice of some parents and nurses, who place the child on its chair, and, putting toys before it, allow it to remain sometimes for hours in that state, while they pursue their household duties. The portion of bowel that usually falls down is about two inches of the *rectum*, which, if it gets compressed between the sphincter muscle, may lead to serious consequences. The mode of procedure when the bowel is either in the anus or beyond it, is to lay the child across the knees on its face, oil the thumb and finger of the right hand, and, while parting the buttocks with the left, gently compress and force upwards the protruded bowel; a compress of several pieces of lint is then to be applied to the anus, and, with an infant, a napkin fastened tightly in the usual manner, to keep it in its place, and the child placed on its side in the cradle. When the child is older, and runs about, a belt must be made, to pass round the hips and fasten in front; two pieces of tape, about two inches apart, are to be sewn to the back of the belt, and, where they pass under the legs, attached to an oval pad, in which a piece of thick projecting cork has been enclosed; the remaining lengths of the two tapes are then to be brought upwards and fastened to the front of the belt. Children of such an age should be given as much rest as possible, and placed on their side or stomach in bed; at the same time, the strength of the patient must be supported by tonics and steel wine. See WORMS.

Adults who are much troubled with piles are sometimes subject to this distressing complaint; in their case, as with children, the bowels must be kept loose, and the body strengthened by chalybeates and bark, the same kind of bandage being employed to prevent the protrusion. It is sometimes necessary to stimulate the bowel, to make it retract and keep in its place, by applying strong astringents, but this can only be done by a surgeon.

PROLAPSUS AND PROCIDENTIA UTERI.—A falling *down* and a falling *out* of the neck, and sometimes of the body, of the uterus,—an accident to which women of a debilitated constitution, who have suffered much and had many children in quick succession, are the most liable. See WOMB, DISEASES OF.

PRONATOR.—The name of a set of two muscles of the arm, whose function is to rotate the hand inwards and downwards, so that the palm is downward and the back upward; one rises from the *humerus*, the other from the *ulna*, both being inserted in the *radius;* they are named, after their shape, the round and the square, or the *pronator teres* and the *pronator quadratus*. The antagonist muscles of these are the supinators.

PRONE.—To lie on the face.

PROOF SPIRIT.—A term used by druggists for the spirit employed in pharmacy in the manufacture of most of the tinctures; and though grain whiskey at proof strength, from being free from the flavour peculiar to malt whiskey, is often used for the purpose, equal parts of alcohol, at 58° or 60°, and water, is the mixture most frequently employed for the purposes for which proof spirits are required.

PROPHYLACTIC SYSTEM. — A branch of medical practice which treats of those medicines and agents which prevent or preserve from disease, and though once considered a necessary portion of medical education, it is now, unfortunately, less studied or less practised than its importance and value entitle it to be.

Among the most conspicuous of the prophylactic agents are cleanliness, the bath, flesh-brush, exercise, diet, regularity in meals, hours of repose, and occupation, and a reciprocity in the relaxation or toil of mind and body. As the modern physician's duty is rather to cure disease than to ward it off, it is not, perhaps, surprising that he should comparatively ignore the prophylactic system as less thankful and remunerative than that of the practice of physic.

PROSTRATE GLAND.—The name of a gland situated in front of the neck of the bladder in men, and the *vesiculæ seminales*. The gland itself is about the size of a chestnut, is traversed by the urethra, and is often enlarged in youth and middle age by scrofulous disease, but is more frequently the seat of disease in men advanced in life. In a healthy state of the body, this gland seems to be almost insensible and passive; hence its proneness to chronic mischief rather than acute, when any disease overtakes it. A swelling of this gland may depend either upon a common inflammation of the organ, the formation of an abscess, the deposition of calculi in its substance—chiefly composed of the phosphate of lime,—a varicose enlargement of the veins, or a chronic inflammation, degenerating into a scirrhous induration of the gland. Though occasionally liable to acute or phlegmonous inflammation, the prostrate, from the reason advanced, is far more prone to chronic than acute disease. The most frequent disease encountered here by the surgeon is scirrhous enlargement, a condition that requires leeches to the part, cold applications, and the internal use of iodide of potassium.

The retention of urine, which is the most distressing symptom of disease of the prostrate, is caused by the distended gland pressing above and on all sides of the tube of the urethra, as it passes directly through the gland. We have given a cut illustrating the under part of the bladder, showing the important organs lying contiguous to the prostrate gland, and their relative situations, under Bladder, which see.

PROTEIN.—A chemical substance discovered by Mulder; derived from a Greek word signifying "I stand first," and said to be the basis of the three chief animal proximate principles, albumen, fibrine, and caseine; but as many vegetables yield the same or nearly the same principles, it is to be obtained from both animal and vegetable substances. It is found in the shops in the form of a yellowish, brittle mass, insoluble in both water and alcohol. The constituents are—carbon, 36; hydrogen, 27; nitrogen, 5; and oxygen, 12 atoms or parts. The most interesting fact connected with this substance is that it lies at the foundation of all life, animal and vegetable.

PROTRACTOR.—The name of a surgical instrument used to draw foreign bodies from wounds.

PROTRUDING BOWEL.—See Prolapsus Ani.

PROTRUSION.—Any part forced out of its natural position. Many parts of the body are liable to what is called a protrusion, or displacement; in some instances the accidents of this nature are called ruptures, in others a Prolapsus, which see.

PROUD FLESH.—A popular name given to those watery granulations which spring up suddenly in cicatrizing wounds, or granulating surfaces, giving the ulcer or wound an uneven, weak, and florid appearance. These excessive granulations, as surgeons call them, are red, flabby elevations that spring up, sometimes round the edge of the ulcerated surface, or in its centre, in circumscribed patches, or separate cones or elevations, and are indicative of a rapid but weak action in the part; they are in themselves perfectly harmless, though, according to popular belief, their presence is regarded as indicative of serious mischief, if not of danger. A lotion of sulphate of zinc, or bluestone, in the proportion of 2 or 3 grains to the ounce of water, if applied on lint once or twice, will generally reduce such exuberant growths, at the same time that it stimulates the vessels of the part to a more equal and steady action. Should the lotions above not answer the purpose, a small quantity of burnt alum may be scattered over the granulations, or a thin spreading of the red precipitate ointment, or a drachm of citron ointment (ointment of the nitrate of mercury), with 3 drachms of red precipitate, may be mixed and applied in the same way; but ointments should be avoided to wounds as much as possible, and lotions, but stronger than the above, used instead. When the system is weak, and the diseased surface large, wine and tonics should be given to the patient, and in extreme cases caustic is to be used, but this is only when the granulations become of a fungoid character.

PROXIMATE CAUSE.—A term used by physicians in a double sense. When a disease attacks an organ, and is named after the organ affected and the nature of the change the part is undergoing, as when inflammation invades the bag of the heart or the stomach (*pericarditis* and *gastritis*), the proximate cause is the disease itself; but if, on the other hand, the name only expresses a set of symptoms, as dyspnœa, phthisis, &c., then the proximate cause signifies the immediate cause that gives rise to all the present symptoms. The causes most generally relied on by medical men are the predisposing and exciting; the word proximate is sometimes used for the immediate or exciting cause.

PRUNELLA, SAL.—A purified saltpetre, run into bullet moulds, and used for colds and sore throats.

PRUNES.—It is only in a dried state that prunes are used for medicinal purposes. The *Prunus domestica* is a cool laxative, and when stewed for a short time makes a very agreeable and useful article for the invalid, in cases of fever or inflammatory action. When eaten warm, stewed prunes act more rapidly and effectively than when taken cold. Prunes also make a good addition to the infusion of senna, especially when intended for children, as they not only sweeten the infusion, but add to its efficacy.

PRURIGO.—A very troublesome affection of the skin, of what is called a papulous character, appearing first in a crop of pimples, and terminating in a scaly scurf. The disease, as its name indicates, is characterized by severe itching. See SKIN, DISEASES OF.

PRURITUS.—Any scaly disease of the skin attended with excessive itching.

PRUSSIC ACID.—Professionally known as hydrocyanic acid, and called prussic acid from being an important ingredient in the article known as prussian blue. This is a colourless liquid acid, like water, but having a powerful pungent odour resembling bitter almonds.

MEDICAL PROPERTIES AND USES.—Hydrocyanic acid is prepared by acting on the ferro-cyanide of potassium with sulphuric acid, and chemically consists of cyanogen and hydrogen, or in elements as thus:—2 atoms of carbon, 12; 1 atom of nitrogen, 14; and 1 atom of hydrogen, = 27. Medical men often make the prussic acid they use by dissolving 22 grains of cyanuret of potassium in 6 drachms of distilled water, and 3 drachms of spirits of wine, placed in a phial, and then adding 40 grains of tartaric acid. A chemical action takes place, in which the water is decomposed by the cyanuret, which unites with the hydrogen from the water, and then becomes prussic acid, while the oxygen from the water passes to the potassium, forming potassa, which is immediately acted upon by the tartaric acid, and converted into super-tartrate of potass (cream of tartar), which, being nearly insoluble, is precipitated in a powder to the bottom of the phial, the pure hydrocyanic or prussic acid floating above like water.

Hydrocyanic acid is one of the most powerful sedatives in the Pharmacopœia, and acts on the system both as an antispasmodic and a sedative. It is given with benefit in chorea, or St. Vitus' dance, asthma, hooping cough, water brash, sea-sickness, dyspepsia, and in the early stages of consumption, especially during the continuance of the persistent cough. In sea-sickness, and the nausea and sickness of a biliary attack, prussic acid will be found most serviceable. The dose of the diluted hydrocyanic acid of the Pharmacopœia is from 2 to 7 drops for an adult; to children it should never be given but by a medical man, or by his advice. The best form of taking this acid is in mint or camphor water. As a lotion, hydrocyanic acid acts as a most beneficial agent in cutaneous eruptions, allaying almost immediately the itching which is often so intolerable a symptom of cutaneous diseases. A useful form of employing hydrocyanic acid in asthma and cough, is to mix 1 drachm of the medicinal hydrocyanic acid with 10 ounces of simple syrup, the dose being a teaspoonful twice or three times a day.

Prussic acid acts directly on the cerebro-spinal system, or brain and spinal marrow, and when taken in excess destroys life by suspending all nervous power. After death the eyes are open and sparkling, and the limbs flaccid. For antidotes and treatment, see POISONS. The best immediate remedies are ammonia, brandy, and cold water dashed over the neck and shoulders.

PSEUDO.—False, deceitful, bastard. A name sometimes applied to diseases of a spurious character.

PSEUDO-ELIPSIS.—A false or defective vision, the person believing he sees objects that either do not exist, or which are contrary to the truth.

PSEUDO-MEDICUS.—A false pretender to the healing art,—an empiric.

PSEUDO-SYPHILIS.—A disease resembling syphilis, but free from any taint of that disorder.

PSOAS ABSCESS.—One of the most extensive and severe forms of abscess to which the body is liable, and sometimes called lumbar abscess. Psoas abscess is remotely a consequence of a scrofulous habit of body, and is immediately the result of some disease in one or other of the lumbar or sacral vertebræ, or of inflammation of the cellular tissue of the pelvis or adjacent parts, resulting in suppuration, which, burrowing under the muscles, particularly between the psoas muscles, gives it the name which this abscess bears; in this manner large quantities of pus, sometimes to the extent of many pints, are collected in the pelvis, before the matter works its way to the spot where the *psoas magnus* quits the body in the groin, and where the abscess usually points.

SYMPTOMS.—Psoas abscess is sometimes many months forming, causing the patient much pain, exhaustion, weariness, and despondency; he loses flesh, his appetite fails, his countenance becomes thin and cadaverous, his rest is broken, and he is nightly exhausted by hectic fever and colliqual or drenching sweats; his debility is at length complete, and he can no longer walk, or even bear the fatigue of standing,

Treatment.—This, during the slow formation of the abscess, must be entirely symptomatic, relieving, as far as possible, the most urgent of the symptoms by tonics and the mineral acids, by wine and a nutritious dietary. As soon as the abscess points sufficiently to warrant its being opened, a small aperture is to be made at the most depending part, and about half a pint, or as much as the patient can bear, drawn off; a plug of lint is then to be placed in the opening, some wine, or ammonia and brandy, given to the patient, who is to be removed to his bed, and the next day a further quantity drawn off, till the abscess is empty. The treatment must then embrace tonics, rich food, mineral acids, cold spongings of the hips, and friction, and such medicines as the peculiar state of the case may demand, care being taken not to allow the aperture to heal till all fear of the abscess re-forming is at an end. See Lumbar Abscess.

PSOAS MUSCLES.—Two muscles of the back and lower extremities. The *psoas magnus* rises from the spinous processes of the lumbar vertebræ, and is inserted into the tuberosity of the thigh bone—the *trocanter*,—and assists in flexing the thigh on the abdomen; the *psoas parvus*, which, rising from the thigh bone, is inserted between the junction of the pubes and the ilium, assisting to bend the spine forward.

PSORA.—Another term for the itch.

PSORIASIS.—A dry, itching, squamous or scabby eruption of the skin, frequently accompanied with small ulcerations. See Skin, Diseases of.

PTEROCARPUS.—The name of a genus of plants of the leguminous order, so called from a Greek word signifying a wing. The kino and dragon's blood resins are obtained from two specimens of the genus.

PTERYGIUM.—A peculiar thickened appearance of the conjunctiva of the eye, resembling a wing.

PTERYGOIDEUS EXTERNUS and INTERNUS.—Two small, wing-like processes of the sphenoid bone.

PTERYGO STAPHYLUS EXTERNUS and INTERNUS.—Two muscles which rise from the sphenoid bone, and are inserted about the uvula.

PTISAN.—An old name for any cool, thin medicinal drink, such as barley water, balm tea, gruel, and orange juice; any beverage prescribed for a fever patient or invalid. Formerly, special ptisans were ordered for each disease.

PTOSIS.—A kind of paralysis of the upper eyelid, causing the lid to fall at any moment over the vision, the patient having no power to draw it up again. See Palsy.

PTYALISM.—An excessive flowing of saliva: salivation, which see.

PUBERTY.—The age of supposed virility in males, and of womanhood in females. The word is derived from the name of a part of the body, and the first appearance of hair on the face. The exact age of puberty differs in different countries, and even in individuals, being earlier in warm climates than it is in cold ones. In this country, from 14 to 16 is the general age at which puberty commences in males, and from 12 to 14 in girls. It is a critical period with either sex, and care should be taken that at such an age no vices are contracted which may lay the seeds of after mischief.

PUBIS OS.—One of the three bones forming the half of the pelvis, the *os innominatum*. The pubes is commonly called the share bone.

PUDDING.—A-well-known article of food, and when made with wheaten flour, with suet or yeast, is equally nutritious and wholesome. The farinaceous puddings made with tapioca, arrowroot, potato-flour, semolina, or other substances of the same nature, though more light and easy of digestion for an invalid, are by no means so beneficial. See Food.

PUDENDUM.—A name given by anatomists to a portion of the integuments, but when spoken of in the plural the parts are called *pudenda*.

PUERPERAL CONVULSIONS and MANIA. See Womb, Diseases of.

PUERPERAL FEVER, or CHILD-BED FEVER.—Of all the evils that beset the woman in labour, from her first pains till once more in the midst of her domestic duties, this disease is the most serious that can assail her, and the greatest danger she has to apprehend.

Symptoms.—These may commence on the third or fourth day after confinement, and though sometimes much later, in general begin within sixty or eighty hours r delivery. The first symptoms are urs, pains in the head, acute and conit pain over the abdomen, increased by sure or the slightest motion. All secretions are suddenly stopped, the k and *lochial* ones especially, the omen becomes tense, the skin hot, the se quick, small, and wiry, though etimes full and bounding, with a te-coated tongue; the countenance is used and anxious, there is occasionsickness and vomiting, the abdomen omes distended, as in tympanites, and respiration is short and hurried. In avourable cases, the pulse becomes re and more rapid, the skin cold and mmy, the tongue, gums, and teeth covered with a dark brown fur, and a , muttering delirium indicates the apaching end.

f all the symptoms, those to be first ticed, and immediately acted upon, are dache, tenderness and tension of the ly, and an anxious countenance.

Treatment.—The first object is to reduce a inflammatory action; this is to be ected by bleeding in a sitting posture to kness or fainting; by the application of ghteen or twenty-four leeches to the abmen, succeeded by hot fomentations: a se of castor oil or a black draught should given immediately, and one of the folwing powders every three hours, till the outh is affected by the mercury.

Take of—

Calomel	24 grains.
Powdered kino . . .	2 scruples.
Dover's powder . .	½ drachm.

ix intimately, and divide into six powrs. At the same time, injections of hot ater are to be thrown up both the rectum d the vagina, and should the inflamman remain unsubdued after the above easures, warm turpentine is to be applied the abdomen, and if needed, a blister id over the umbilical region. Should bility set in, the strength is to be pported by cordials, stimulants, and utriment in small but often repeated antities.

By many medical men puerperal fever thought to be infectious, but the point as never yet been satisfactorily settled. n many of its symptoms this disease is pposed to closely resemble peritonitis, d the treatment in many respects is arly the same. The morbid appearances n a *post mortem* clearly show that the eritoneum, as well as the womb and its essels, have been affected.

There is another form of this disease, called MALIGNANT PUERPERAL FEVER, in which the symptoms are from the first of a typhoid character, and where bleeding, if practised at all, must be done immediately, and a very small quantity of blood withdrawn. In other respects the practice is generally the same, with stimulants; but in this case administered earlier.

PUGIL.—A term used by the old doctors, signifying a small handful of any plant, herb, or flowers. The vagueness of the term however was corrected in a measure by directing that as much should be taken up for a pugil as could be contained between the *thumb and two fingers.* The word is derived from

PUGILLUS.—A small handful.

PULEGIUM.—The Latin name of the Penny-royal herb, which see.

PULMONARY COMPLAINTS.—By this term is understood all affections of the lungs, whether of an acute or chronic character, from inflammation of the lungs (*pneumonia*) to the most ordinary congestions from cold. See the several diseases appertaining to the LUNGS.

PULSE.—The stroke or beat of an artery, caused by the alternate dilatation and contraction of the vessel, in its turn caused by the action of the heart, which propels the blood through the aorta and all the arterial tubes by a similar action, proper to and arising in the heart (see SYSTOLE, and DIASTOLE), and hence serving as an index to the forcing power of the heart, and the velocity at which the blood is moving through the arteries of the body.

There is one characteristic of the pulse upon which we must pause to remark, which is, that it always makes up in velocity, as far as possible, for what it loses in strength. Thus the pulsation of a newly born infant may vary from 120 to 140 beats in a minute, whilst in the healthy adult of twenty-five or thirty years of age its standard is 80, declining after forty years to 75, 70, and 60 pulsations a minute. In the infant, at 120 the pulsations are so rapid, small, thin, and delicate, that they feel under the finger more like the rapid vibrations of a thread than what they afterwards become at adult age,—the strong, resistant beating of a vessel loaded with vital fluid capable of fulfilling the function imposed on it by nature, that of building up the living frame through which it bears its nutrient flood. The two extremes of pulsation in a healthy life may be taken as 115 in the infant, and 60 in old age, the average ligneous acid, charcoal, chlorine, and the chlorides of lime and tin, are among some of the most powerful and effective agents used to arrest the process of putrefaction. See ANTISEPTICS. According to modern theory, the cause of all contagious and epidemic diseases is putrefaction.

PUTRID FEVER.—Typhus or spotted fever. See TYPHUS.

PUTRID SORE THROAT (professionally called *Cynanche Maligna*).—This disease generally attacks children and young people of a delicate constitution, or those of a frame enfeebled by some prior disease, such as scarlatina.

The SYMPTOMS are giddiness and pains in the head, with cold shiverings and alternate hot flushes; great heat of skin, flushed face, eyes suffused with blood; stiffness in the neck, with sore throat and difficulty of swallowing, soon followed by hoarseness and thirst. The palate and fauces appear of a bright rosy tint, but afterwards deepen in colour, and become dotted or streaked with dark brown spots. In addition to these symptoms, the tongue is covered with a thick, dark brown fur, the gums and lips are studded with small vesicles, while a thin acrid discharge oozes from the mouth and nostrils, excoriating the adjacent cuticle. A similar exudation escapes from the anus, producing or followed by diarrhœa. As the fever increases, the strength of the patient declines, delirium and coma soon after supervene, with great difficulty of breathing. The pulse is generally small, quick, and irregular, and in some cases the skin is covered with an erysipelatous tint, and the throat, chest, hands, and feet become swollen. On the second or third day the tongue changes to red, the inflammation extends through all the passages leading to and from the mouth, a fœtid odour is given off with the breath, and the strength rapidly declines. By the sixth day, all the inflammatory symptoms have disappeared, while those of typhus have set in; the skin is generally brown, and peels off in scales over the body, except from the soles of the feet and the palms of the hands, where the cuticle comes off in large pieces.

The convalescence in this disease is always tedious, and often attended with relapses, or attacks of partial or general dropsy. When the fever and urgent symptoms decline about the fourth or fifth day, a favourable termination may be expected; when, however, the throat assumes a deep red or purple colour, succeeded by sloughings and an offensive discharge from the mouth, an unfavourable result may be anticipated.

In the TREATMENT of this disease there are three objects aimed at by the physician:—1st, to prevent the inflammation passing into the putrid stage; 2nd, to facilitate the separation of the dead parts or sloughs; and 3rd, to restore the strength of the system. The first object is to be obtained by the employment of wine, tonics, and a nutritive diet. The principal drugs used for this purpose are ammonia, quinine, ether, and occasionally opium. For the full treatment of this stage see TYPHUS. The second object will be fulfilled by stimulating, astringent, and tonic gargles, such as the following:—

Stimulating Gargles.—No. 1. Take of—

Vinegar of capsicum	2 ounces.
Camphor water	3½ ounces.
Tincture of myrrh	4 drachms.

Mix: to be used every four hours.

No. 2. Take of—

Solution of the chloride of lime	2 drachms.
Sage tea	6 ounces.
Tincture of capsicum	1 drachm.

Mix, and use as above.

Tonic Gargles.—No. 3. Take of—

Port wine	4 ounces.
Compound tincture of bark	6 drachms.
Water, sufficient to make	6 ounces.

Mix: to be used as above.

No. 4. Take of—

Barley water	5 ounces.
Syrup, simple	1 ounce.
Muriatic acid	20 drops.

Mix: to be used as above.

Astringent Gargles.—No. 5. Take of—

Infusion of roses	6 ounces.
Burnt alum	½ drachm.
Diluted sulphuric acid	½ drachm.

Mix: to be used three or four times a day.

No. 6. Take of—

Infusion of logwood	5½ ounces.
Tincture of catechu	3 drachms.
Compound tincture of benzoin	1 drachm.

Mix: to be used every six hours.

All these gargles are to be used in the usual manner by youths and adults, but for children the sponge end of a probang should be wetted with the gargle, and the tonsils, uvula, and fauces of the child's mouth thoroughly wetted with the fluid.

Some medical men recommend a syringe to be used for children when gargles are ordered, but this we have ever found inconvenient, hurtful, and sometimes most objectionable, exciting violent coughing and other distressing symptoms. The probang also assists to remove the sloughs when formed, and is every way more manageable than the syringe.

The third object—that of restoring the patient's strength—must be carried out by a light, nutritious diet of jellies, farinaceous foods, beef tea thickened with Ridge's Food, wine, and such tonics as the condition of the patient may require. If diarrhœa should supervene, it must be checked by chalk, aromatic confection, tincture of kino, and opium. The patient's room should be well ventilated, and the air purified by chloride of lime. If there be much heat in the skin, the body should be occasionally sponged with vinegar and water. In a full habit of body it may be necessary to bleed at the commencement, and give purgative medicines; but beyond an effective laxative, neither should be adopted unless imperatively called for, on account of the great tendency of the disease to assume typhoid symptoms, with an obstinate diarrhœa. Though bleeding is generally forbidden, it is often necessary to apply leeches to the throat. The German physicians have great faith in belladonna in this disease, and regard it as one of the best of remedies: the following is their mode of preparing and employing that article.

Take of—

Extract of belladonna .	2 grains.
Distilled water . . .	1 ounce.

Mix in a mortar, and give 5 drops every six hours to a child under six years of age, and from 6 to 10 drops to all above that age, four times a day. For systematic treatment, see Typhus Fever.

PYELITIS. — Inflammation of the kidney, terminating in suppuration and abscess.

PYLORUS.—The name of the lower orifice of the stomach, or the gatekeeper, as it is called. That aperture by which the digested food, or chyme, passes from the stomach into the *duodenum*, or commencement of the small intestines. See Stomach.

PYRAMIDALIS.—A muscle of the abdomen, situated on each side of the medial line, which, rising from the pubis, terminates in the linea alba.

PYRETHRUM.—The name of the pellitory of Spain, used for toothache, from its property of causing a great flow of saliva. See Pelletory.

PYREXIA.—A term used by medical men and nosologists as the distinctive head of all fevers, from its signification of fire, or burning.

PYRMONT WATERS.—The name of a somewhat celebrated spa in Westphalia, noted for its chalybeate and carbonaceous qualities. See Waters, and Spas.

PYROLIGNEOUS ACID.—A strong, corrosive acid, closely resembling acetic acid, obtained from the distillation of wood, and having an empyreumatic odour, is used to impart to meats prepared with it that aromatic flavour only obtained in general by drying in wood smoke. Pyroligneous acid, or wood vinegar, is even stronger than acetic acid, and requires to be reduced by *seven* times its bulk of water to become useable as ordinary vinegar, 1 pint of the acid, mixed with 7 pints of water, making a gallon, old measure, of excellent white vinegar.

PYROMETER.—The measurer of fire. A very useful instrument, invented by the celebrated Mr. Wedgwood, to measure the great heats and high temperatures required in the arts.

PYROSIS. — A peculiar affection of the stomach, in which, after some premonitory pains, there is an eructation of wind, and immediately a quantity of clear, tasteless water is ejected from the stomach. See Water Brash.

Q

Q is the seventeenth letter of the alphabet, and as an abbreviation is used by medical men in their prescriptions: thus, Q. P. (*quantum placet*), as much as you please; and Q. S. (*quantum sufficit*), as much as is necessary. As a numeral, Q stands for 500, and with a dash over it (thus, $\bar{Q}$), for 500,000.

QUACKERY.—It has been often and truly said that ignorance is the bane of society, leading equally to moral and social vice. The progress made in the last fifty years in this country in the arts which benefit and instruct mankind has not been larger in its way than the spread of education; yet, though the people are now comparatively well informed, and every man is more or less a reader, and every town in the empire has its mechanics' or some other scientific institution, where the poor man is made familiar with all the great truths of nature, and is taught the physical laws that regulate the economy of human life,—yet for all this broadcast intelligence, this great social amelioration which the march of science and education has achieved, and despite the humanizing influence of Industrial Exhibitions, museums, and Crystal Palaces, the amount of ignorance that still exists is as remarkable as it is disheartening.

In no shape can this ignorance show itself more disastrously to the well-being of thousands than in the fact that quackery exists in this country to an extent that far exceeds that of any other period in the annals of England, even in those days when no schoolmaster was abroad, and to read and write were privileges unknown to the million. The credulity with which the people trust the most precious gift in their possession—their health — to any charlatan who boasts that he can cure every ill to which flesh is heir, is something marvellous to witness, while the confidence they repose in their deceivers, and the amount of nostrums they swallow, is on a par with their infatuation. The idea of a man inventing a medicine that should cure the same disease in every individual afflicted with it, no matter the age or sex, would of itself be sufficiently absurd; but when a quack advertises to cure a *multiplicity* of diseases with *one* nostrum, the audacity of the act ought to be universally scouted, instead of being received with faith and accepted with confidence.

Unfortunately for the credit of our national intelligence, it is not the mechanic and the less informed of the people who patronize quack doctors and their medicines, but that class of the public who ought to know better, and by their means, position, and education, set an example to those less gifted and more prone to be led astray: but while a peer of the realm is not ashamed to let his name be used as a decoy, we fear there is little hope of breaking the fetters of so mischievous and so fatal an ignorance.

It is well known that most of the nostrums sold as quack or patent medicines are composed of the most violent and drastic drugs in the Pharmacopœia, some of which, in certain constitutions, act almost as poisons, and on that account are never prescribed by qualified medical men in such cases. But so long as they produce a violent effect, the dupe is satisfied, giving no thought to the consequences which such excessive action may produce on his system and after health.

That some few of the articles sold as patent medicines are harmless — nay, beneficial — we have repeatedly stated, and, from experience of their efficacy, have recommended; but such medicines are very old, and have stood the test of nearly a century. It is our intention, at the close of the work, to give a list of the most approved articles of this nature.

QUADRATUS FEMORIS AND QUADRATUS LUMBORUM.—The names of two muscles: the first, rising from the lower part of the pelvis, is inserted in the thigh-bone, and assists to turn the legs inwards; the other rises from the crest of the *os innominatum*, and being inserted into the processes of the lumbar vertebræ, assists to bend the trunk on the hips.

QUANTITY OF FOOD REQUIRED.—The absolute quantity of food required to nourish the body varies greatly in different persons,—partly from inherited peculiarity of constitution, partly from habits of life, and other conditions. The supply must equal the demand, so that no positive rules as to quantity can be laid down. In some persons, without any peculiarity that constitutes actual disease, the waste of the body is much greater, and what is eaten is less perfectly assimilated, and more food is consequently required than in others. The rule, therefore, laid down by Dr. Holland, not to fill the stomach to a sense of uneasy repletion, is much better than any positive direction as to the quantity of food. The quantity of food should clearly never be greater than the stomach can easily digest.

QUARANTINE.—A sanitary regulation established to prevent the propagation of fevers and pestilence, by denying the entrance into a healthy town or port for forty days, of all persons or merchandise coming from an unhealthy place. See Lazaretto.

QUARTAN.—An ague, or intermittent fever, whose paroxysms occur every *fourth* day, or after an interval of seventy-two hours. A double quartan ague is a fever that returns twice in succession,—first on the fourth or proper day, and again on the fifth day also, thus making a double quartan return on every third day.

QUASSIA.—An intensely bitter wood, obtained from a tree a native of British Guiana, and many of the islands in the

Gulf and Carribbean Sea. Quassia, the *Picræna excelsa* of the British Pharmacopœia, and belonging to the Natural order *Simarubaceæ*, is obtained from two varieties of the order, the *Quassia amara* and *Simaruba excelsa*, and is exported in the form of chips of the wood and the raspings of the bark.

Preparations and Medical Properties.—Besides the two forms of its bark, the only preparations of this drug are an extract, infusion, and a simple and compound tincture. Quassia acts on the system as a tonic, stomachic, and febrifuge, and though it has been found useful for the last-named purpose, it is now seldom employed for any but tonic and stomachic purposes,—and for these it is admirably adapted,—in the form of an infusion. From being destitute of *tannin*, it makes an excellent vehicle for iron and mineral acids. Combined with *canella alba*, cascarilla, and one or two cloves, quassia makes one of the best bitter infusions to be found in the Pharmacopœia, and in that condition may be combined with soda or potass, with the tincture of the muriate of iron, or with nitro-muriatic acid. The established strength of the infusion is 2 drachms of quassia to a pint or 20 ounces of water, and the dose from two tablespoonfuls to a wineglassful. The active virtues of quassia reside in a crystallized salt called *quassin*.

QUERCUS.—The oak, a genus of trees of which there are several varieties. See Oak.

QUICKENING.—An old and popular term, expressive of the time when the motion of the child is first felt by the mother, and when the fœtus springs into life. This motion is first perceptible between the fourth and fifth months, sometimes the tenth week, but more frequently about the eighteenth.

QUICKLIME.—Lime unquenched, or caustic; lime from which the carbonic acid has been driven by strong heat in a kiln. Quicklime is only used in pharmacy for two purposes,—the making of the *liquor potassæ*, or caustic potass, and to procure lime water. Quicklime is, like potassa, the oxide of a metal (*calcium*); and, like the alkalies, unites with the mineral and vegetable acids, forming compounds called carbonates, sulphates, muriates, &c. The two most important preparations, however, are the carbonate (common chalk), and the sulphate (gypsum, or plaster of Paris). When water is thrown upon quicklime, the oxygen of the water is absorbed, causing a rapid increase of temperature; the stone crumbles into a fine powder; while the hydrogen is given off with large quantities of vapour, and a highly caustic article, known as slaked lime, is the result.

Accidents from Quicklime.—When, for building purposes, large quantities of quicklime have been slaked, the fiery powder is usually covered over with a thick layer of sand, and left in heaps for several hours before being mixed with sand and water to form mortar. From these insidious heaps, frequent and most dangerous accidents occur, for persons, thinking the hillock safe, in the wish to pass the obstacle, jump on the treacherous bank, and instantly sink into a mass of burning lime. With men the accident is bad enough; their clothes are instantly consumed, and the hot particles, clinging to the flesh, rapidly destroy the cuticle to which they adhere; but with females the case is infinitely worse, their clothes rest on the earth or sand, and their persons come into immediate contact with the lime, causing most dangerous and sometimes irreparable mischief. Next in frequency, is the accident of quicklime getting into the eyes, causing violent inflammation, and sometimes loss of vision. In both cases, and indeed in all cases of burning, the *treatment* is the same. No time must be lost in an attempt to remove the corrosive powder from the body; but a quantity of vinegar and water should be at once poured over the part, till the lime has been neutralized, when a cold acid poultice of bread soaked in vinegar and water is to be applied, and the part eventually dressed with a dusting of violet powder. When the injury is very extensive, it may be necessary to prescribe calomel and opium to subdue the constitutional disturbance. When the eye is the part injured, the organ is to be washed with repeated quantities of vinegar and water, a cold poultice applied; and if the quantity of lime has been large, it may be necessary to place four or six leeches round the orbit: the cold applications should be continued, and strict seclusion from light enjoined for some time.

QUICKSILVER, MERCURY, or *Hydrargyrum*.—A fluid metal, so called from its extreme subtlety in flowing about on any surface on which it is poured, and from its shining, silvery appearance. Quicksilver, more commonly known as mercury, is distinguished from all other metals by being fluid at the ordinary temperature of the air; this is owing to its extreme fusibility, for at seventy-two degrees below the freezing point of water it becomes solid, and may be cut with a knife, or hammered out into plates. Quicksilver is almost the heaviest of all the metals, being fifteen and a half times more ponderous than water,—so heavy, in fact, that nearly every other metal floats upon it.

Mercury is found in nature in two conditions,—as a pure metal (virgin quicksilver), and in combination with sulphur; in which latter form it generally receives the name of *cinnabar*. In the mountains of Hungary, those of Istria, and among the crevices of the Cordilleras, in Mexico, the pure or virgin metal is collected and packed in iron bottles, which, containing about 2 cwt. each, are exported to Europe for commercial purposes. The amount of pure ore obtained, however, is very small compared with the proportion yielded by smelting it from its compounds, particularly from cinnabar, which is a red sulphuret of mercury, and known as *vermilion*, one of the most brilliant red pigments we possess. This cinnabar, composed of sulphur and quicksilver, when broken up and mixed either with quicklime or iron filings, and placed in a retort over an intense heat, becomes decomposed; the sulphur leaves the quicksilver to unite either with the iron or the lime, in one instance forming a sulphate of iron, in the other a sulphate of lime; while the pure metallic mercury passes into the receiver. Mercury is extensively used in the arts,—first, in the smelting of metals, to enable the pure ore to be obtained from its alloy; in the manufacture of barometers and thermometers; for compensating pendulums for clocks; in water-gilding; in silvering looking-glasses; and finally, it enters into the daguerreotype process. On account of the very low temperature at which mercury is made solid, and being uninfluenced by ordinary ranges of temperature, it has been selected for the gauge of those delicate meteorological instruments by which we ascertain the pressure of the atmosphere and the heat of the surrounding air.

MEDICAL PROPERTIES AND PREPARATIONS.

Though in the arts one of the most useful of the metals, it is as a remedial agent in medicine that mercury commands our special attention. From the number of preparations of this mineral, the action of mercury on the system is both various and complicated: of these, however, the most important are its alterative, purgative, and cathartic properties; its action on the skin as a diaphoretic, deobstruent, and discutient; its influence on the stomach as an emetic; and its peculiar action on the glands of the mouth as a sialogogue: besides these actions, all the preparations of mercury are liable to produce that extraordinary effect known as *ptyalism*, or salivation. The pure metal, though seldom now given, was formerly used as a mechanical purgative, to unlock long constipated bowels, and by its *weight* force a passage through the alimentary canal, when, from *intussusception* or other obstruction, the natural channel was impeded. For this purpose, from one to two ounces of pure metallic mercury was formerly given as a purgative.

Several of the preparations of mercury once in vogue as medicines are now quite exploded from modern practice, or at best only used as veterinary drugs. Of these the two sulphurets—black and red—called Ethiop's and Turpeth's mineral, are examples, the first having been used as a diaphoretic and the latter as an emetic. The simplest and safest form in which mercury can be exhibited is as a protoxide, and this condition we obtain under the name of the GREY POWDER (*Hydrargyrum cum Cretâ*), or mercury with chalk, obtained by rubbing metallic quicksilver with prepared chalk till the mercury is killed, or all the globules have disappeared, and the white of the chalk and the silver gleam of the mercury have been converted into a uniform dark grey powder. As an alterative for an adult, the dose of this preparation is from 1 to 3 grains; as an aperient for children, from 2 to 4 grains; and as a mild but efficient purgative for a full-bodied adult, from 6 to 10 grains.

The next preparation in importance and general use is CALOMEL, a protochloride of mercury, formerly known as the submuriate of mercury, but now called *Hydrargyri Chloridum*, or *Calomelas*. As an alterative, cathartic, antisyphilitic, and antiphlogistic, there are few diseases in which this preparation may not be and is not employed, both alone or in combination with antimony, ipecacuanha, squills, hemlock, opium, kino, or guaiacum. The adult dose of calomel, as an alterative, is from 1 to 2 grains, and as a purgative from 4 to 6 grains. For children the doses must vary according to age, from a quarter of a grain to 1 grain. The preparations of calomel are,—

1st. The *Compound Mercurial Pill* (*Pilulæ calomelanos composita*, or *Plummer's pill*), a most useful diaphoretic and deobstruent medicine, particularly in diseases of the skin: as each pill contains 1 grain of calomel, the dose is from one to two pills, or from 5 to 10 grains of the mass.

2nd. The *Black Wash* (*Lotio nigra*). —This lotion, used for specific and syphilitic ulcers, is made, according to the strength required, by adding from 2 to 10 grains of calomel to every ounce of lime water, and shaking the two together, a black or dark grey lotion being the result. In using this lotion care should be taken to shake it up before applying it on every occasion.

Next to calomel, the preparation of greatest importance is CORROSIVE SUBLIMATE, the bichloride of mercury, formerly the muriate or oxymuriate of mercury, but now known as the *Hydrargyri Bichloridum*. This, on account of its great solubility, is one of the most rapid and fatal of all mercurial preparations, and one of the strongest mineral poisons known. As a general tonic and corrective in syphilitic cases, in *lepra*, and many chronic diseases of the skin, the continued use of corrosive sublimate, if accompanied with sarsaparilla, or other vegetable drinks, will be found most beneficial. Some medical men prescribe it in pills, others in mixtures, and employ it as a gargle in ulcerated sore throat. The best form, however, and at the same time the safest, in which this drug can be used, is that of an alcoholic solution. By this means the dose can always be regulated, and its use intermitted at proper epochs; and then, when resumed, its action has all the potency of a new drug. For the information of our readers, we give a formula for the preparation of such an alcoholic solution. Take of—

Corrosive sublimate	12 grains.
Spirits of wine	1 ounce.

Dissolve, add—

Tincture of lavender	20 drops.

Mix. *Five* drops to be taken in water or decoction of sarsaparilla, dandelion, or dulcamara, three times a day for THREE days; *seven* drops to be taken in the same manner for the next THREE days; and then *ten* drops three times a day for THREE days more, when an aperient medicine is to be taken, and the drops *discontinued for three clear days*; beginning again on the thirteenth day with the original dose of *five drops three times a day* for three days, and increasing the dose every third day in the same proportion as first prescribed, till the maximum dose of ten drops three times a day has been attained, when another interruption of three clear days, with an aperient medicine, is to succeed, and this regular sequence is to be continued till the disease for which the drug is prescribed has been subdued. See SKIN, DISEASES OF, SCROFULA, &c.

In all cases where this medicine is recommended to be so taken, it is of the utmost importance that implicit obedience to these directions should be observed, not only as to the quantity and regularity of the dose, but to the diet adopted while taking it. A common and very serious mistake as regards the efficacy of the medicine arises from an idea of the patient that an excess of dose at one time will compensate for an omission at another, an idea both erroneous and dangerous. Corrosive sublimate is sometimes used as a lotion, dissolved in lime water, as an application for sluggish or specific ulcers, under the name of Yellow Wash.

The BISULPHURET OF MERCURY (*Hydrargyri Bisulphuretum*), or Ethiop's Mineral, as an antisyphilitic, is sometimes used as an external application for fumigations; a few drachms being thrown on a red hot plate of metal, the patient standing over the heated plate, and confining the vapour by means of a sheet thrown round the body, and so retained till all the fumes have escaped, or till a perspiration breaks out on the skin in consequence of the heat of the vapour.

The IODIDE OF MERCURY (*Hydrargyri Iodidum*).—This preparation is employed in lepra, and other strumous affections of the skin, for which purpose it is given in doses of from one-eighth to half of a grain, or made into an ointment in the proportion of 3 or 5 grains to the ounce of simple cerate, and applied to the affected parts.

The next preparation of consequence is the RED OXIDE, commonly known as the Red Precipitate, and professionally designated as the *Hydrargyri Nitrico-oxidum*. This article is only used as an external application for fungoid growths, and to kill vermin in the head. Its principal effect, however, is as a stimulant in chronic affections of the eye and eyelid, and when finely powdered, and mixed with simple cerate, it receives the name of *Golden Ointment*.

The ARSENICAL SOLUTION OF MERCURY, known as Donovan's Solution

(*Liquor Arsenici et Hydrargyri Hydriodatis*), the dose of which is from 5 to 20 drops. There are several other preparations of mercury, in the form of ointments, in the Pharmacopœia, some of which are of considerable importance, such as the common MERCURIAL OINTMENT (*Unguentum Hydrargyri*), commonly called Blue Ointment; WHITE PRECIPITATE OINTMENT (*Unguentum Hydrargyri Ammoniati*); CITRON OINTMENT (*Unguentum Hydrargyri Nitratis*), a very useful ointment, and frequently employed in obstinate skin diseases.

There are few drugs which exercise so marked and specific an action on the body as mercury, or which, under judicious management and skilful combination, can be made to produce so many and contrary effects, especially on the secreting organs; but at the same time, there is no drug which requires more care, or which is so often abused. In the exhibition of mercury, care must be taken, when it is given to produce some constitutional action, that its purgative tendency be checked by combining it with kino, catechu, or opium; and when meant to effect an altered action on the liver or biliary vessels, that it be given as nearly as possible in a simple, unmixed form, night being the best time to administer calomel or grey powder for those results. Some persons are so sensitive to mercury that the smallest dose will produce salivation; others, again, can take large and repeated doses without fear of any untoward effect.

To guard against the probability of salivation, in all cases the patient, while taking mercurial medicines, whether by the mouth or by the skin, as in the use of ointment or liniment, should be advised to keep the body warm and dry, as moisture is one of the most frequent exciting causes of salivation. See SALIVATION.

Those who work much with mercury, as glass silverers, and other artisans, are liable to salivation from the absorption of the metal through their skin, while those state prisoners who in Austria are condemned to the mines of Istria, become prematurely old, emaciated, and paralyzed, dying in decrepitude years before their natural time. The best remedy in cases of poisoning by mercury is albumen, or the white of egg, which should be instantly given when satisfied that a preparation of mercury has been taken. See POISONS.

QUINCE.—This sour, astringent, but aromatic fruit, in part resembling an apple, and in part a common pear, is botanically called the *Cydonia vulgaris*, and belongs to the Natural order *Rosaceæ* —that order which yields all our most delicious fruits, the plum, nectarine, apple, pear, raspberry, peach, and many others. From its sharp, crude rind and juice, the quince is never eaten till it has been first cooked by boiling or baking, when it is largely used to give flavour to pastry, or converted into confection or marmalade. On account of the astringent nature of its juice, the quince was formerly prescribed —and with great advantage—in cases of diarrhœa, hemorrhage, or any excessive discharge, and for such purposes may still be employed with great benefit.

The only medicinal use now made of the fruit is in the form of a decoction of the bruised seeds, which, as a demulcent drink in coughs, colds, hoarsenesses, and other catarrhal affections, is extremely serviceable, the large quantity of mucilage contained in the seeds rendering the decoction so beneficial: a quarter of an ounce of bruised seeds to a quart of water is the proportion employed. The marmalade of quince is very serviceable in cases of relaxed sore throat, and an excellent and grateful remedy for public singers, orators, actors, and all persons affected with a sudden loss of voice from relaxation.

QUININE.—Next to opium and tartar emetic, there is not a more valuable drug in the whole range of the Pharmacopœia than the active principle of the *cinchona* bark—quinine. We have already shown, under the heads of Cinchona and Peruvian Bark, that the important medical effects obtained in giving the bark, or powder of the bark, of either of the three varieties of the cinchona tree—*cordifolia*, *lancifolia*, and *oblongifolia*,—depended upon two alkaloid principles, those of *quina* and *cinchona*, found, but in different proportions, in each variety, though from the *cordifolia*, or the yellow species, it was soon discovered that the largest amount of the most valuable active agent (*quina*) was to be obtained.

PREPARATIONS AND MEDICAL PROPERTIES OF QUININE.—It is unnecessary to explain here the long, very delicate, and complicated chemical process by which the two active principles of the cinchona bark are procured, or the mode by which, on the addition of vitriol or sulphuric acid, the pure crystals of the sulphate—or di-sulphate, as till lately called—of quinine are obtained. The sulphate of quinine, though by far the most important and frequently used of all the preparations of this alkaloid, is by no means the only one used. Next in importance to the sulphate is the muriate of quinine (*murias quinæ*), prepared by acting on the sulphate of quinine by the *chloride of barium*. The third preparation is the citrate of quinine (*citras quinæ*), a form of this drug not to be mistaken for, or confounded with, the fourth preparation, or the *citras quinæ effervescens*, or effervescing citrate; this, an extremely elegant form of the drug, being in crystals, which effervesce when added to water, like a saline and acid mixture, the crystals consisting of a citro-tartrate of soda with citrate of quinine, in the proportion of 59 grains of the former to 1 grain of the latter. The dose is, consequently, 1 drachm in water two or three times a day. The fifth form in which quinine is now prescribed is one in which its tonic properties are combined with antispasmodic effects, under the name of valerianate of quinine (*valerianas quinæ*), composed of valerian, soda, and muriate of quinine. And, finally, the two liquid preparations, — the tincture (*tinctura quinæ composita*), composed of sulphate of quinine dissolved in tincture of orange peel, and the ammoniated solution (*solutio quinæ ammoniata*), a preparation in which the pure alkaloid quina is dissolved in the aromatic spirits of ammonia (spirits of sal volatile). There are some other preparations, but not often used, such as the *arsenate of quinine* and the *sulphate of quinidine*—another active principle, found in the same barks which yield quinine, and possessing the same properties and action as the other. Though one of the most potent and reliable of all our vegetable tonics, it is from its specific action in breaking up the periodicity of intermittent fevers, or those regular recurrences of their paroxysms, that quinine has become so valuable to science and humanity as a remedial agent; for when once the diseased punctuality that forms the most stubborn feature of that fever is broken or interrupted, the disease, to use a figure of speech, becomes vulnerable, and easily assailed by the proper remedies for each stage of the paroxysm.

As an ordinary tonic, quinine may be given either in the form of pills, mixtures, or powders, though a very common and convenient way of using it is in combination with port wine, in the proportion of 20 or 40 grains to the pint, according to the strength required, thus giving either 1 or 2 grains with each ounce, or half wineglassful taken. It may also be given in infusion of quassia, cascarilla, canella alba, or any bitter mixture, and in cases of debility attended with diarrhœa, combined with aromatic confection and chalk mixture. Another favourite method of prescribing quinine is in combination with infusion of quassia and the mineral acids —sulphuric acid with the sulphate, and muriatic with the muriate of quinine. It is in intermittent fever, however, that the mode of exhibition is an object of the greatest importance; and here considerable judgment is necessary on the part of the medical man to decide, not only on the quantity to be given, but the time and form of giving it. The rule that should guide the physician in all cases in prescribing medicines should in such cases be rigidly adhered to—always to give the drug to be employed in a dose *sufficient* to insure, as far as possible, the object aimed at in its exhibition. In intermittent fever, the point desired is to break the chain of the diseased action, so as to prevent the paroxysm from coming on at its proper time; to shorten the duration of the fits, and lengthen the interval between the recurrence of each paroxysm. To effect these objects,—the two last depending on the first,—the quinine should be given about one or two hours before the calculated time of the attack, the latter period when given in a powder, the former when taken in a liquid form. The quantity of quinine necessary to effect the chief object must depend on the age, strength, and sex of the patient, and also on the hold the disease has obtained of the system; or, in other words, the length of time the fever has continued. The full adult dose in cases of ague or tic-douloureux is from 5 to 20 grains. When given in a liquid form, the quinine should be rubbed down with an ounce and a half of water, or camphor mixture, with 5 or 7 drops of diluted sulphuric acid, to insure its complete solution, and the draught taken an hour previous to the expected time of the attack. See INTERMITTENT FEVER.

The ordinary tonic dose of the sulphate, muriate, and citrate of quinine is from 1 to 3 grains for an adult, and from a quarter to half a grain for children from one to three years of age. The dose of the compound tincture is from 1 to 4 drachms for an adult, and from 5 to 20 drops for children from one to four years; while of the solution the dose for adults is from 30 to 60 drops, and from 4 to 15 drops for children up to four years of age.

Quinine is apt to produce pain and tightness in the head, and sometimes congestion of the brain; on this account, it should never be given till the bowels have been first opened by an effective dose of aperient medicine. In all cases of inflammatory fever, or great nervous excitement, the employment of quinine is imperatively *interdicted*, its use in such cases being not only hurtful but dangerous.

QUINSEY, or **INFLAMMATORY SORE THROAT**, professionally known as *cynanche tonsillaris*, which, better than the old-fashioned name of squinsey or quinsey, explains the nature of the disease,—an inflammation of the tonsils.

SYMPTOMS.—Redness of the throat and fauces, with spots dotting their surface; a tightness of the gullet, accompanied with great difficulty of swallowing; headache; a hot, dry skin, with thirst, and a full, strong pulse. The tightness in the throat, with the heat and difficulty of swallowing, rapidly increase, rendering it impossible for the patient to pass even the saliva, every attempt to swallow being attended with a convulsive motion of the muscles of the throat, and the regurgitation or return of all fluids through the mouth and nostrils. A constant flow of a viscid salivary secretion soon after sets in from the mouth, giving a fœtid odour to the breath, and irritating the patient by its overflowing of the lips. The breathing is often greatly impaired, materially altering the voice, and, from the swelling of all the parts, the patient can neither smell nor hear; the countenance becomes sunken and anxious, the skin rough and dry, and the hands and feet cold and clammy. Often, at this stage of the disease, and when the patient appears to be almost suffocating, the abscess, the cause of all the suffering, bursts, and the disease may be said to be at an end, as in such cases the recovery is extremely rapid. Sometimes, however, there is no suppuration, and the disease terminates by what is called resolution, or by the tonsils and parts recovering their former condition. At other times, again, it terminates in ulceration and sloughing.

The TREATMENT in the first stage of the disease must be of the antiphlogistic character, acting on the bowels by means of aperient medicine, such as one or two antibilious pills and a dose of Epsom salts, the warm bath, and, if necessary, an emetic; abstaining from all stimulating drinks or animal foods, applying hartshorn and oil to the throat on a piece of flannel, and covering the whole with a hot bran poultice, so as to encircle the throat, and by inhaling the steam of warm water, or sage tea. Sometimes leeches and blisters are required, but in general the applications already suggested, or a poultice of flour and mustard, will effect all that is necessary. If the abscess does not burst spontaneously into the mouth, it must, if possible, be opened either from within or from without. The swelling on some occasions is so severe and diffused, that it is impossible to open the mouth sufficiently wide to enable the abscess to be reached, while from there being no external enlargement of the glands, it is equally impracticable to open the abscess from without. In such cases as these, especially when the difficulty of breathing is severe, and the patient's state is critical, medical men have been compelled to effect their object—the opening of the abscess—by stratagem, and by exciting a sudden alarm or personal fear in their patient, produce a shriek, or some unguarded action, which has the effect of bursting the abscess, and thereby giving instant relief and safety to the sufferer, the result amply atoning for the means employed and the momentary terror inspired. After the opening or breaking of the abscess, the *treatment* of the case is very simple; frequent gargles of warm water, and an emollient poultice round the throat, with beef tea and wine, if necessary, is all that is generally needed. This is a disease very liable to return, and even degenerate into a state of chronic enlargement of the tonsils. In such cases, blisters are often necessary, or the application of iodine or camphor, and mercurial ointment, to induce absorption; while astringent gargles, or the application of caustic internally, are not unfrequently rendered necessary, and in severe cases the tonsils are obliged to be wholly extirpated.

QUOTIDIAN.—Every day. A term applied to an ague, or intermittent fever, recurring every twenty-four hours. See INTERMITTENT FEVER.

R

R is the eighteenth letter of the English alphabet, and, among medical men, is used as an abbreviation at the beginning

›rescriptions (thus, R/), signifying take. As a numeral, R stands and with a dash over it (R̄) for

IES.—Madness. A medical term, nes used in connection with the matic insanity arising from the abid animals, such as hydrophobia. medical men use the term dis- ly, as *rabies canina* and *rabies* or the madness caused by the a mad dog, and that resulting from

HITIS.—The medical term for , which see.

ICAL.—A term sometimes used ly to express the nature of a cure effected by removing the base or the malady.

ISH. — A well-known edible le, which, as an antiscorbutic, aten alone or in combination with endive, and other ingredients, as is of the utmost value in scorbutic of body, but especially serviceable s of sea-scurvy. But though in extremely valuable in all such o a person of weak digestion, or ject to flatulence, the radish will more injurious than beneficial. ident of their corrective property antiscorbutic, radishes exercise a ting action on the kidneys, and lly increase the urinary secretion.

IUS.—A name given by anato- the external of the two bones of arm.

IX.—The Latin for a root, and a common use among medical men cating the part of the tree or le to be used and employed, in istinction to *cortex*, the bark or d *folia*, the leaves.

NBOW WORM.—A disease of ; a kind of *herpes*. See Skin, es of.

N WATER. See Water.

SINS.—The article so universally under this name is an extremely ape, gathered at certain periods, efully dried in the sun, from the finest kind are called raisins un. The best raisins are obtained amascus, Malaga, and Valentia, account of the quantity of sugar cilage they contain, are both nutri- nd wholesome. When taken in y they act as a mild purgative, f stewed, and eaten warm, like they act still more effectively. are used in pharmacy in the preparation of the lenitive electuary, and the compound tinctures of senna and cardamoms.

RALE.—A French term for a rattle; a peculiar sound made by the air in passing through the air-tubes of the lungs when obstructed or contracted by disease, and called in Latin *rhonchus*. See Stethoscope.

RAMENTA.—Scales or filings; the same as *limatura:* the filings of any metal.

RAMOLLISSEMENT.—A medical term, borrowed from the French, signifying a softening of the brain; a chronic affection, the result of a previous inflammation, or some injury to the head, resulting in the more or less complete loss of memory and nervous power, the brain in many cases becoming entirely disorganized, and appearing, on dissection, like soft putty. When ramollissement is partial, it generally induces paralysis.

RAMUS.—A branch. By anatomists, the word is used to express the perpendicular portion of the lower jaw, the extremity of which is adapted to a recess in the temporal bone, to form the articulation of the jaw to the head. From this word is derived the term ramification, as applied to the branching off of the arteries and veins.

RANA.—A frog. Anatomists give to the artery and vein lying beneath the tongue the name of *ranal*, or *ranine*, from their fancied resemblance to that reptile.

RANCEDO.—A chronic thickening of the mucous membrane of the mouth and pharynx, causing partial loss of voice and hoarseness, and requiring counter-irritation and stimulants, such as embrocations of camphorated oil and hartshorn, or even blisters, with hot poultices or fomentations.

RANSOME'S PATENT FILTER.—This useful and extremely cheap filter consists of a circular porous stone of a peculiar character, through which, when immersed in a tank or butt of water, only the pure element can pass, all impurities being refused access. A tube being attached to the stone, and the air exhausted from it by the mouth, the water, perfectly pure, will distil into any vessel placed to receive it. On long sea voyages such a filter is of the utmost importance, when the water, as it frequently does, becomes thick and foul, and the health of passengers and crew is injured in consequence. For the mode of forming filters, and the most practical one for emigrants, and the use of voyagers and colonists, see article FILTER.

RANULA. — An obstruction in the sublingual salivary duct, by which a small swelling or tumour is produced, to which surgeons give the name of *ranula*, from its supposed likeness to a small frog; or, as some imagine, from the peculiar noise made by the patient in speaking, supposed to resemble the sounds made by a frog.

RANUNCULUS.—A genus of acrid, poisonous plants, of which the common field buttercup (the *Ranunculus repens*) is the most familiar example. The juice of each variety is equally sharp, excoriating, and acrid, some having the property of blistering when applied to the skin; while the stems or the juice of each variety, if taken internally, acts on the system as an acrid poison. When dried, however, or the plant is macerated in water, the injurious effects are almost entirely destroyed.

RAPE OIL AND SEED.—The grass-like plant which yields the extremely fine seed from which rape oil is obtained, is a native of this country, where it is largely cultivated for cattle. The seed, which is so small that it has to be threshed on sail-cloths, contains a large proportion of oil, is expressed from it by means of a powerful mill, that not only separates the oil, but compresses the crushed seed into cakes, which, cut into pieces and dried, are sold for fattening cattle, under the name of oil-cake. Rape oil is occasionally used in pharmacy for making cerates, and as an adjunct in liniments.

RAPHANUS.—The wild radish, the seeds of which, when eaten, are said to produce spasms of the muscles and paralysis of the joints.

RAREFACTION.—A chemical term, signifying the making rarer, lighter, and more elastic any body by the application of heat. The term is chiefly confined to gases or the atmospheric air, which itself affords a good example of rarefaction; for, within a definite altitude, it is the direct source of life, but beyond a certain height becomes so rarefied, or thin, that blood bursts from the mouth and nose of him who breathes in it, the individual respiring with pain and difficulty; and should he ascend beyond such an altitude, the air becomes so highly sublimated, or rarefied, as to be totally unfit for animal *existence*.

RASARA, OR RASURA.—A shaving; a word sometimes employed to express the state in which a drug is kept in the shops, as the shavings or raspings, in the instance of quassia, guaiacum, and logwood.

RASH.—A rash is an eruption of red or purple spots on the skin, which may arise from a surfeit, or be the result of some crudity in the stomach and bowels, and may either take place in the form of a few minute pimples, or in a number of irregular blotches or patches, appearing on the face and neck most frequently, but sometimes extending over the entire body. Rashes generally appear on adults after eating largely of certain kinds of food, particularly shell-fish, mushrooms, cheese, bacon, or sausages which have been long kept or too highly dried: they may also result from drinking cold water when the body is heated by exercise. The rashes to which infants are liable proceed from the irritation of the teeth, or from some acidity in the alimentary canal.

All rashes are attended with heat, irritation, thirst, and sometimes pain. The best TREATMENT for rashes, when they occur in adults from the eating of crude food, is to take an emetic of 15 grains of ipecacuanha, or a mild dose of aperient medicine, and, in severe cases, a warm bath. For children, according to their age, a little magnesia, or a few spoonfuls of senna and manna tea, will be in general enough to remove the exciting cause.

The only diseases with which rashes can be confused are scarlet fever, measles, and chicken pox, from which, however, they can be distinguished by the absence of constitutional symptoms, and the period at which those eruptive diseases make their appearance.

RASPBERRY. — This delicious and wholesome fruit, which possesses the advantage of not becoming acid in the stomach, forms a refreshing and cooling article for the invalid suffering under fever and thirst. This fruit is only used medicinally to make raspberry vinegar, a few spoonfuls of which, added to the patient's beverage, imparts acidity, flavour, and benefit to the drink taken; while, mixed with equal parts of water, it makes an excellent gargle in cases of relaxed sore throats, and those conditions of sudden loss of voice to which public speakers, singers, and clergymen are frequently liable.

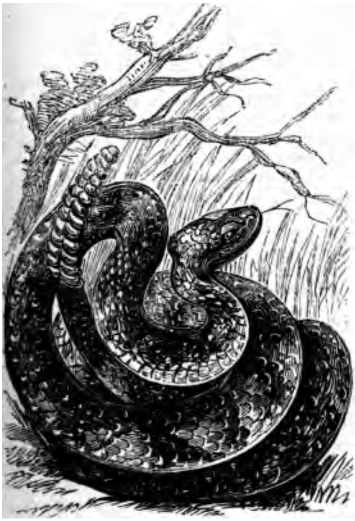
RATAFIA.—A delicious cordial, made by macerating the bruised kernels of apricots, cherries, and peaches, with cinnamon, cloves, and other spices, for a certain number of days in brandy, and finally sweetening the whole with lump sugar.

RATANY, OR RHATANY.—The root of a South American plant, the *Ratanhia*, sometimes used as a tonic, but more frequently as a dentifrice in a scorbutic state of the gums.

The drug, though kept in powder and tincture, is now seldom used in medicine, except by dentists, who, on account of its astringent properties, frequently prescribe it as a wash for the mouth and gums.

RATSBANE.—A name given to the *strychnos nux vomica,* though white hellebore, *veratrium*, arsenic, or any article potent enough to destroy such vermin is called a ratsbane.

RATTLESNAKE AND COBRA, BITE OF.—The bite of the *cobra di capello* is represented as the most dangerous of all the reptiles of a tropical region.

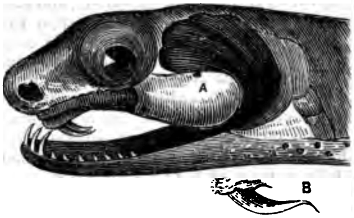


THE RATTLESNAKE.

Before proceeding to describe the consequences and treatment of the rattlesnake's bite, or any of the tribe, we purpose giving a brief description of the physiology and anatomy of the reptile itself, as regards its organ of assault and injury. When the snake has raised himself for combat, whether the *cobra* or the *rattle*, he makes a full inspiration, by which the whole body becomes inflated. The scales are separated from each other, and the interstitial skin becomes visible from the head to the tail. In this manner the reptile breathes, the body alternately swelling and sinking, the head and neck, however, remaining distended. After it has sufficiently excited itself, the animal moves forward with great velocity, and with flashing eyes suddenly darts on its victim with open mouth, and, at the very instant he strikes, ejects his *virus* or deadly poison into the wound made by his fangs.

The cobra has two rows of teeth, which appear to spring from the palate, and two fangs, which seem much shorter than the teeth, from the fact of being partly concealed by the poison bag, in which, till the moment of striking, they are in a measure secreted. The instant the wound is inflicted, the roots of the fangs press behind on the venom bag, causing the fluid to run down a groove or channel in each fang, by which means the *virus* is carried directly into the punctures made. In snakes the lower jaw is not articulated to the upper, as in other animals, but, by means of two bones, is connected with the back part of the head by powerful ligaments. Accordingly, when the snake opens his mouth, the condoyles of the lower jaw, moving on these bones at the back of the head, are thrown *outward*, and carrying the extreme point of the upper jaw with them, dilate the back of the throat to a great extent, making the upper jaw uncover, and erect the fangs, which press, as we have just stated, on the venom bags, causing the poison to flow through the ducts into the grooves of the fangs.

In the cut we have given of the cobra's head, the skin has been removed from the side of the jaw to afford a clearer view of the bags of poison, and the backward position of the fangs, which, by the opening of the jaws, are flung forward ready to inflict the dreaded wound. The severity of the serpent's bite depends much upon the state of the person's health, the depth of the wounds inflicted, and the amount of *virus* contained in the bags at the time; for if the animal has been roused to combat a short time previous, the probability will be that the bags will be nearly empty, and comparatively harmless. The poison of both the cobra and the rattlesnake is perfectly *harmless* if taken into the stomach, and may be spilt on any part of the body with impunity, unless it should come in contact with some scratch, wound, or abrasion of the body. This is the reason why nature has supplied these reptiles with weapons to inflict a puncture, and then, without injury to themselves, to insure the poisoning of the wound made. So subtle and potent is the *virus* of the cobra, that the *hundredth* part of a grain of its poison, inserted into a scratch in a rabbit or guinea pig, has been proved sufficient to destroy life in either case. From these experiments we can clearly understand how small an amount is necessary to destroy an adult man.



HEAD OF THE COBRA.

A. The poison-bag. B. A fang, removed.

The SYMPTOMS arising from the bite of the cobra, rattle, and whipcord snake of Australia are nearly the same, and begin with an intense stinging pain in the part bitten; the wound and limb soon swell, and become livid; these local effects are either preceded or followed by nausea, sickness, and fainting; great oppression at the chest, anxiety, and difficulty of breathing succeed, soon after followed by drowsiness, which passes into a state of coma, and in this condition, in from half an hour to two hours, the patient usually expires.

The TREATMENT.—In all cases of bites of poisonous reptiles the first and most important duty is to suck the wound, cauterize or excise the bitten part, prevent the absorption of the *virus*, and by proper medicines rouse the patient's mind to resist the depressing influence of fear, and finally dissipate the coma that towards the end steals so fatally over the brain.

1st. Sucking the Wound.—Unless there *should* be a crack in the tongue, a chap or abrasion of the lips or mouth, the most deadly virus, as we have shown, may be sucked with perfect impunity, and where the injury is in the hand or arm, the patient should suck the wound himself. When this cannot be done, however, the person who undertakes that duty should supply himself with a large basin and a jug of warm water, and, sitting on a level with the limb, grasp the part firmly with both hands, one above, the other below the wound, and applying his lips boldly and confidently over the bite, with a quick but effectual motion of the cheeks and tongue, suck all the blood and moisture from the puncture, every minute or two spitting it out into the basin, and, rinsing his mouth with the warm water, return to his task, not forgetting to maintain his pressure on the limb with his two hands. This sucking process should be persevered in for twelve or fifteen minutes at least; a broad piece of tape or a garter being first passed once or twice round the limb an inch or two above the wound, between it and the heart, and then firmly tied.

2nd. *Cauterization or Excision.*—When no person can be found with sufficient resolution to suck the wound, a bandage or garter should be instantly tied round the limb *above* the wound, and if cupping-glasses are at hand, or those artificial means can be obtained recommended under Cupping (which see), they should be applied at once, washing the part with warm water hastily before applying the glasses. These are to be removed every three or four minutes, the part again washed with clean water and a sponge, and again applied for at least half an hour. When, however, no such appliances can be obtained, the absorption having been arrested by the bandage, the wound is to be well and repeatedly washed with warm water, the fingers being used to force out all moisture or particles of blood from the bite, and the punctures freely cauterized with the nitrate of silver, which should be scraped to a point, and then forced into the apertures made by the reptile's fangs. If, however, the punctures are deep and narrow, a sharp penknife or bistoury should be used to enlarge them, so that the bottom of the wound may be reached, and the place freely cauterized. When the wound is large and deep, the state of the reptile to be feared, and the pain and anxiety are very great, the part injured must without any hesitation be cut out, the wound washed, and the raw surface side liberally rubbed with the ırm fomentations applied over he ligature or bandage round ɔntinued.

rouse the Patient by Proper —To effect this result, re-ses of stimulants and anti-s are to be given, and the ept constantly moving, and y subjected to sudden asper-cold water. The following nay be given every ten minutes of an hour. Take of—

ʳ	2 drachms.
of sal volatile .	40 drops.
·e of valerian .	½ drachm.
ric ether . . .	15 drops.
or water . . .	1 ounce.

.ian surgeons are in the habit the following draught, and it as often as necessary.

—

's solution of	
c	30 drops.
ıum	10 drops.
mint water . .	1 ounce.
ıice	½ ounce.

e taken directly, and repeated hour till the symptoms abate; ıe time, they employ injections ·astor oil, and turpentine, till operate. In severe cases, there on why such remedies should lied in this country.

neither cupping-glasses nor tic be obtainable, the part must with red-hot skewers or the poker, and the wound dressed r only, or the caustic potass *ısa*), strong ammonia, or strong ; or, in default of any of these, may be sprinkled into the The importance of compelling t to walk about, supported by ; men, must not be lost sight .ecessity of occasionally dashing over his head and chest forgot tised, as on the judicious em-of both, the hope of rousing the coma entirely depends. is an agent that may be em-h benefit.

G MADNESS, OR MANIA. hat condition of mental aberra-the patient, in a state of the :y, is not only dangerous to equally violent towards him-when coercion by a strait-confinement in a padded room, restrictions of the limbs, are necessary to guard him against his own furious rage. See MANIA, and MADNESS.

REACTION.—By this term medical men understand a secondary action, or the effect of a first cause. When a person unaccustomed to snuff is induced to take a pinch, the first effect on the nervous expansion that lines the nostrils is that of a stimulating astringent action, imparting more or less of gratification to the brain; in a few seconds, however, the nerves recover themselves, and a *reaction*, as it is called, sets in, inducing a succession of sneezing fits, by which the irritating substance is thrown off, and the vessels previously stimulated by the snuff pour out a greater or less amount of mucus. In the same way, a person passing suddenly from a heated room, with his throat and mouth unprotected, into the cold night air, has his throat and air-passages suddenly and often unconsciously stimulated or contracted, and in a short time after returning to the warmer atmosphere is attacked with sneezing, a running at the eyes and nose, hoarseness, and probably a difficulty of swallowing, the effects in this case, as in the other, being the *reaction* to the exciting cause. To simplify the meaning of this term, reaction is always the *effect* of a *cause*. When a man on the verge of starvation is suddenly fed, if only with a few spoonfuls of food, a reaction from debility to strength and inflammation may succeed, rendering it necessary even to bleed the man who an hour before was unable to stand from exhaustion. As debility may be followed by a reaction of inflammation, so inflammatory action may be succeeded by a reaction of prostrating debility. It is on these accounts that in fevers, inflammations, and diseases generally, the reaction is always regarded by medical men with so much anxiety, and demands such forethought and judgment, both in anticipating and in treating when it sets in.

REALGAR.—The old chemical name for red arsenic, or the *proto-sulphuret* of arsenic, an impure combination of the metal, found chiefly in China. The *sesqui-sulphuret* of arsenic is the name of that well-known brilliant pigment called *orpiment*, or King's yellow.

RECEIVER. — A globular chemical vessel, made of glass, earth, or iron, used for distillation, and forming the inferior half of a still: the receptacle for what passes from the Retort, which see.

RECEPTACULUM.—A reservoir, a receptacle. *Receptaculum chyli* is that large vessel, made up of the lymphatic vessels and lacteal branches, situated behind the abdominal viscera on the lumbar portion of the spine, and from which the thoracic duct proceeds with the chyle up the trunk to the heart. See CHYMIFICATION, *and cut.*

RECREATION.—The necessity for a due amount of bodily rest and mental relaxation in the business of life, as a prophylactic agent, and a promoter of health, is so self-evident a fact, as to render it quite unnecessary to insist upon a truth so universally acknowledged.

Though recreation in some form or other is imperatively demanded in every case where perfect physical and mental health is desired, the kind and amount of the relaxation must differ with every grade of society, and almost with every case. The person of wealth and station, who has the free command of all the pleasures and amusements of society, requires quite as much recreation, or change in the form of his pastimes, as the merchant, mechanic, or labourer, though of a different order and degree; for in the latter cases men employed in some active pursuit from day to day, and year to year, find in a mere interruption of their toil, or the commonest relaxation, more real and permanent benefit than men of fortune can derive from the most intellectual or elaborate enjoyment. Thus, while an excursion of a few hours into the country, a game at bowls or tennis, or a visit to a theatre, would to the mind of the overtaxed mechanic be attended with the happiest results, to the man sated with pleasures and excitement, a couple of hours spent at the turning lathe, in the active occupation of a garden, or with a box of carpenter's tools, would yield benefits to mind and body quite as salutary as those derived from the contrary recreations by the others.

In prescribing recreation as a therapeutic agent, all the physician has to consider is the state, age, and occupation of his patient, and then lay down such a system of amusement and change as his judgment may deem suited to meet those conditions. This fact, however, should never be lost sight of, that to the invalid or valetudinarian a system of recreation that, while amusing the mind, will exercise in some degree the body, is as necessary to his physical well-being as medicine.

RECTIFICATION.—A higher process *of distillation;* a second distillation. Whisky or any spirit submitted to the still for a second time has thereby the remaining portion of its water dissipated, and passes over into the receiver in the form of pure—

RECTIFIED SPIRITS, OR SPIRITS OF WINE.—A powerful spirit, nearly free from all water, and of strength varying from 40° to 60° over proof. See SPIRITS OF WINE, and ALCOHOL.

RECTIFORMIS. — The anatomical name of the lining membrane of the vagina.

RECTUM.—The third and last portion of the large intestines, and so named from its running the greater part of its course in a straight line. The rectum is united above with, or rather is a continuation of, the colon, and terminates below, after a curve, at what is denominated the *anus,* where it is surrounded by the *sphincter* and *levator* muscles. The internal coat or mucous membrane of this bowel, like the lining membrane of the urethra, is liable to a species of inflammation, resulting in stricture or contraction, a disease which some empirical surgeons a few years ago endeavoured to prove to be a remarkably frequent, instead of being, what is the truth, a very rare disease. See STRICTURE OF THE RECTUM.

RECTUS.—A name given by anatomists to several muscles of the body, such as the *rectus lateralis,* a lateral muscle of the neck and head; *rectus externus* and *internus,* two muscles of the back of the neck, inserted into the posterior part of the skull to bend the head backwards; the *recti,* muscles of the eye, four to each organ,—the superior and inferior, and the external and the internal; *rectus abdominalis,* a muscle of the abdomen, and *rectus femoris,* or the straight muscle of the thigh.

RECUMBENT POSTURE.—A position in which it is often necessary for the medical man to place his patient when overtaken by fainting, that the circulation may flow more easily. In some diseases—as those of the spine or hip, and in cases of rupture, or the passage of biliary calculi, and in aneurism—it is necessary to confine the patient for days and even months to the recumbent position. The manner of lying must depend upon circumstances, but it may be either on the side, back, or stomach, according to the cause which requires it.

RECURRENT.—Running backwards. A name given by anatomists to the branch of a nerve of the neck, which, instead of proceeding forward or laterally from its parent stem, turns back and runs upwards to the larynx; also the name of a branch of an artery in the leg, the *posterior tibial*, from which the recurrent is given off.

RED GUM.—An eruptive disease to which children at the breast are very subject, particularly about the time when the gums first begin to get hard and painful. Though very often excited by irritation, it sometimes proceeds from some imperfection of the milk, or disordered state of the mother or nurse's system. The eruption commences with a crop of very small, hard pimples, of a pale red or pinkish colour, which from the whiteness of the skin surrounding the patches gives the rash a more positive appearance than it otherwise would have. The eruption is attended with considerable itching, causing the infant great irritation: it may continue from two to three days, and usually terminates by a slight desquamation.

Treatment.—This is a very harmless affection, and merely requires a warm bath to allay the itching and relieve the breathing, which is sometimes affected when the eruption is full. A little mild aperient medicine, such as magnesia, with a small quantity of manna dissolved in water, or one of the following powders, may be given night and morning, with a teaspoonful of senna tea, sweetened, on the following morning. Take of—

Heavy magnesia . .	12 grains.
Grey powder . . .	2 grains.
Powdered rhubarb . .	2 grains.

Mix, and divide into two powders.

REDUCTION.—A term used both by chemists and surgeons—by the first to the operation of smelting, or driving off the combinations from metallic ores, so as to obtain the pure metal; and by surgeons, for setting or reducing a dislocation or fracture. See Dislocation and Fracture.

REFRIGERANTS.—A class of cooling medicines given in fevers as an astringent and refreshing drink, to lower the temperature of the body, and abate the febrile symptoms. Refrigerants are sometimes applied externally, to reduce the heat of the part where they are placed. Among the foremost of this class of medicines stands ice, and freezing mixtures; all the mineral and vegetable acids, diluted, and taken in water; cream of tartar, lemonade, soda water, nitre, sweet spirits of nitre, spirits of mindererus; all the summer fruits; tamarinds, oranges, lemons, and limes. See Drinks.

REFRIGERATING LOTIONS.—Foremost among the simple cooling applications to the head, or other parts of the body, is water in which pounded ice has been dissolved. A good cooling lotion can always be obtained by mixing a wineglassful of gin with a pint of cold water, and applying the mixture for some minutes to the part on a piece of folded lint; then removing the pledget, and allowing the moisture to evaporate, and repeating the process of covering and then exposing the wet surface for some time. If variety of applications is required, either of the following prescriptions may be employed, and in succession, if desired.

1*st*. Take of—

Spirits of mindererus .	6 ounces.
Camphor water . . .	14 ounces.

Mix, and apply on linen cloths.

2*nd*. Take of—

Sugar of lead . . .	2 drachms.
Powdered nitre . . .	½ drachm.
Water	16 ounces.
Vinegar	4 ounces.

Mix, and use as above.

3*rd*. Take of—

Sal ammoniac . . .	4 drachms.
Powdered nitre . . .	3 drachms.
Cold water	3 pints.

Dissolve, and apply as in the former cases. This is an extremely cold application, and well adapted for the head in fevers.

REGIMEN.—A branch of the therapeutic treatment of disease, by which, through the system adopted of food, drink, exercise, recreation, and dress, the physician endeavours not only to conquer the disease, but to lead his patient over the stage of convalescence back to his original health and strength.

Though the importance of a well-digested regimen is universally acknowledged, it is seldom adhered to with the attention which its value demands, either by the patient or the medical man—the one too often evades it, and the other, having laid down his programme, too frequently neglects to see his system carried out to the letter. As food constitutes the most important branch of what is included under the general name of regimen, the reader is referred to the article Food, and those of Digestion, Exercise, Baths, and Recreation, for a clearer insight into this subject.

REGION.—This is a term used, somewhat vaguely, by medical men to express a part of arbitrary dimensions: thus, the front of the chest may be called the pectoral region; the back, the dorsal region; and the abdomen, though sometimes designated the abdominal region, is for more specific purposes subdivided into nine distinct regions. See ABDOMEN.

REGULAR GOUT (*Podagra Regularis*).—One of the four species or varieties of gout; and so named from its coming on with violent inflammation of the joints, enduring for several days, and receding gradually, with swelling, itching, and desquamation of the cuticle over the affected part. See GOUT.

REGULUS.—An old chemical term, applied to the purest part of a mineral, when separated from its dregs, its oxides, or earthy impurities. Most of the metals had formerly some preparation so called, as the regulus of antimony, the regulus of arsenic, &c.

RELAXED SORE THROAT.—In weak constitutions, this state of the throat and fauces may exist without any constitutional disturbance; in which case, all that is necessary is to use some astringent gargle, such as red sage tea and vinegar; raspberry vinegar, or alum and water, with tincture of myrrh or infusion of rose-leaves, with thirty drops of diluted sulphuric acid to every eight ounces of infusion; but if something still more contracting should be required, the annexed gargle may be used. Take of—

Pomegranate bark (bruised)	½ ounce.
Hot water	10 ounces.

Boil slowly for 15 minutes, strain, and add—

Powdered burnt alum	1 drachm.
Tincture of catechu .	1 ounce.

Mix, and use three times a day.

RELAXED UVULA.—This affection is to be treated in the same manner as a relaxed sore throat. Sometimes it is necessary to touch the uvula with caustic, to insure its retraction, but in general this may be effected by acid gargles. See GARGLES.

REMITTENT FEVER.—Fevers of this type, though arising from the same cause as intermittent fever, have no distinct and clear *intermissions*—one paroxysm following on the other before the former has completely passed off,—the exacerbations occurring about every twenty-four hours. There are three varieties of this fever, all of them more or less depending on some bilious derangement of the system; they are, however, diseases almost exclusively confined to tropical climates, and will be treated of under the most general form in which they are presented to the physician, that of *Yellow Fever*, which see.

REMITTENT FEVER, INFANTILE.—This form of febrile disease, to which early childhood is sometimes liable, is now allowed to be identical with typhoid fever, and possesses this peculiarity, that in remittent fever there is some abatement of the severity of the paroxysms about the middle of the day; the exacerbation, however, is always most severe as midnight approaches, the coming on and the passing off of each paroxysm having a singular dependence on the ebb and flow of the tide. The frequency and severity of the attack constitutes the great danger of this disease, which must be treated in the same manner as Typhus, which see.

RENAL.—Belonging to the kidneys; as the renal plexus, the renal artery, vein, and nerve. This word is derived from *ren, renis*, a Kidney, which see.

RENNET.—An artificial animal gastric juice, used for coagulating milk to obtain a curd, which when properly salted and pressed constitutes cheese. Rennet is made by macerating a small piece of the internal coat of a calf's stomach in warm water for a short time; the water extracting the acid from the membrane, which, like vinegar, alum, or lemon juice, when added to the milk, slightly warmed, instantly converts it into curds and whey; an article which, either alone or with sugar and nutmeg, makes a light, nutritious, and extremely wholesome food for the invalid or person with impaired digestion. Rennet is also used for making whey when that beverage is required for the sick-room.

REPELLANTS.—External applications, used to drive away a disease or eruption from the surface to some other part of the body. Cold is among the most powerful of all the repellants; the practice, however, is bad, and not free from danger.

REPTILES, BITES OF.—The directions already given, under Rattlesnake, embrace some of the general rules to be adopted in cases where persons have been bitten or stung by venomous reptiles.

Of the bites of reptiles we have in this country very few examples. Indeed the only animal of this kind which we have to dread in England, is the common adder. The bite is by no means painful, but it is rapidly followed by alarming weakness, unless stimulants are given on the spot. The patient grows pale and faint, cold sweats break out, the limb becomes swollen and powerless, and without care, death may close the scene.

If the person bitten has sufficient presence of mind, the first thing he ought to do is to check the introduction of the venom into the system. Immediately tie a tape or string between the wound and the heart, and scarify the bite with a penknife; and if the person can reach the part with his mouth, the best way would be to suck the wound: no air-pump or exhausted cupping-glass could effect the purpose so well as the beautiful mechanism of the human mouth. If not, any of the bystanders might safely do so, as, unless there is a cut upon the lips, no dangerous results need be apprehended from the poison. If this is not practicable, a small glass, exhausted of its air by burning a piece of paper in it, should be placed over the wound, and olive oil may be freely rubbed in it. The patient should then be put to bed; wine or brandy given; hot bricks applied to the feet, and a mustard poultice to the abdomen. Any abscesses which form afterwards will require to be opened.

Mosquitoes, bugs, fleas, and some other insects also poison the wound by injecting into it a fluid which renders the blood thinner and more fit for suction. In warm climates, the bite of the mosquito is often followed by severe inflammation; and if the skin be scratched, troublesome sores may result. The pain and itching produced by these bites are greatly relieved by rubbing a little liquid ammonia over them, either pure or mixed with an equal proportion of olive oil; eau-de-Cologne or lavender water may be used for the same purpose. A pledget wetted with the extract of lead is, however, quicker and better than all others.

Insects which sting—as wasps, horse-lies, hornets, or bees—not only insert a oison into the wound, but also frequently eave the sting itself, or part of it, behind. n this case the sting should be carefully rawn out with a pair of tweezers, or the kin may be opened with a needle, when little squeezing will generally force out he sting. It is also recommended to ress down the skin on each side of the ting with the pipe of a watch-key; the ting will then protrude, and may be seized nd drawn out; the part is then to be ressed with the extract of lead. When he throat is stung, the best application is he following:—Put a piece of ammonia f smelling salts, the size of a nut, and ur tablespoonfuls of vinegar, or a little ther, into a glass, and bathe the part nstantly with the liquid.

RESIN.—A vegetable extract, sometimes fluid, at others concrete, insoluble in water, but soluble in spirits of wine, naphtha, and oils, in which latter property resins are distinguished from gums, which are insoluble in the latter articles, and only soluble in water. All medicinal resins, whether fluid or solid, contain an essential oil and benzoic acid, with earthy and other ingredients. The best examples of the fluid resins are the balsam of tolu, Peru and Canada balsams; and of the solid, myrrh, benzoin, and thus. See ROSIN.

RESOLUTION.—One of the terminations of an inflammation. When an inflammatory action sets in in a part, and after threatening to terminate in swelling and suppuration, subsides naturally, without any injury or loss of substance, the disease is said to terminate by resolution, or by a spontaneous cure.

RESONANCE AMPHORIC.—A peculiar sound heard in auscultation, and said to resemble the sound made by blowing into a tall, narrow vase or bottle.

RESPIRATION.—The function of breathing; the special duty of the lungs; that process by which the blood is constantly purified, deprived of the noxious properties it acquires in each journey through the system, and becomes recharged with life-sustaining principles; and, besides this, is that function by which animal heat is generated, and the body rendered capable of resisting all the influences of climate and temperature.

Though the lungs are the chief organs employed in the function of respiration, they are by no means the only parts engaged in that vital action, the first, as it is the last, function of human life. To show the importance of respiration, and its dependence, with the other two actions —circulation and digestion,—in forming the series of vital functions, we have only to stop the circulation for a brief time, to suspend digestion, while the stoppage of respiration at once arrests both the circulation and the digestion; the lungs, then, become a second stomach, and respiration may be likened to a second digestion, only of air instead of food. To show the intimate connection that exists between the two functions of the stomach and lungs, in many of the lower animals the same organ that digests the food is made to do the same duty by the air; and though in man and the higher animals each function has a separate organ, the intimate connection between the skin and the lungs, as we have so repeatedly shown in this work, is a good example of that mutual dependence of action to which we have referred. The skin is not only a breathing but an absorbing organ, and calculations have been made to show the exact quantity of air inspired, and of water expired, in every twenty-four hours. The parts subservient to the function of respiration are the lungs, trachea, and bronchial tubes; the ribs, spine, and breastbone forming the cage in which the chief organs are situated; with the pleura or lining membrane of the thorax, the diaphragm, and the muscles which move the bony cage, namely, the intercostal muscles.

In the construction of the whole respiratory system, every anatomical and physiological advantage has been introduced to render the wonderful mechanism complete. In the first place, the singular construction of the windpipe, and the provision made by its elastic rings for keeping it always open; the immense number of the air-cells into which the substance of the lungs is divided; the minute subdivisions of the bloodvessels, so as to insure the exposure of the largest quantity of blood to the greatest volume of atmospheric air in the cells; the easy and convenient manner in which the bones of the thorax rise and fall, accommodating themselves by contraction or dilatation with each requirement of the lungs, while they shield the organs within from all ordinary danger or injury; and lastly, the peculiar action of the diaphragm or midriff, which, contracting from the centre, draws down the whole framework of the thorax, and plays an important part in the function;—all these comprise only a part of that marvellous whole contrived to perform such a simple yet complex action as that of respiration.

The object for which respiration is performed is duplex,—first, to decarbonize the blood, by converting the impure venous fluid into oxygenized or arterial blood; and secondly, to generate animal heat. The theory of this process we have already explained under Circulation, Lungs, &c.; it is therefore only necessary to repeat, that all the impure blood returned to the right side of the heart, is sent by the pulmonary artery to be minutely distributed over every part of the two lungs by the ramifications of the pulmonary vessels; that through the delicate membrane separating the blood in each terminal artery, the oxygen from the air in the corresponding air-cell passes, decomposing the carbon in the dark, impure blood, and converting it into carbonic acid gas, which is given off in the expiration; while the blood, now charged with oxygen, becomes of a bright scarlet colour, and, collected by innumerable small vessels, called pulmonary veins, is eventually led back to the left side of the heart, from whence it is sent by the aorta to every part of the body. The function of respiration, or breathing, consists of two parts, each distinct from the other,—inspiration and expiration: by the first, air is drawn into every cell of the lungs, instantly effecting the change just described, and raising the temperature of the body by the animal heat generated by the chemical action of the oxygen of the air with the carbon of the blood; and by the second, the air inspired, with a quantity of carbonic acid gas and watery vapour, is expelled from all parts of the lungs.

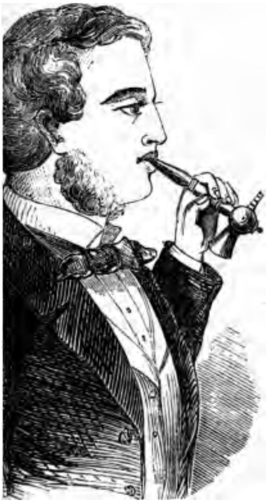
The number of inspirations performed in a minute depends very much on the position of the body, and the occupation of the person at the time. The general number in health varies from eighteen to twenty-four inspirations in a minute, the amount of air being about twenty cubic inches inspired at every respiration, *one* respiration, as a general rule, taking place to every *four* pulsations of the heart. The number of respirations increases with the pulsations of the heart, but in less rapid ratio. About 20,000 cubic inches of air are supposed to pass through the lungs every hour, or 266 cubic feet in twenty-four hours.

Disease exercises a marked influence on the respiration; in some cases it falls as low as ten, and even seven inspirations in a minute, and rises as high as forty-four, and in extreme cases to sixty inspirations in a minute. In such cases the proportion of the respiration to the circulation was equally remarkable, one pulsation occurring to two respirations, and in some extreme cases the proportion has fallen so low as to give only one pulsation to fourteen respirations.

RESPIRATOR.—A medical instrument, manufactured of many sizes and shapes, and meant to modify the temperature of the atmosphere before allowing it to enter the lungs, where its humidity or coldness in persons with a delicate organ, or suffering under some bronchial malady, often produces great irritation, cough, shortness of breath, pain, and anxiety. Respirators are composed of two or more layers of fine wire gauze, fitted

amework made and adapted to
of the chin and mouth, to which,
of a strap round the neck, it is
accommodate itself in such a
hat all the air entering the mouth
through the minute apertures in
llic gauze, in doing which it be-
ghtly elevated in temperature by
n of the oxygen on the metal
which it passes. Of the benefit
ators there can be no question,
s of weak respiratory organs, or
consumption, though their pre-
ghtly form is a great drawback
eneral use, especially by females,
indeed, a properly folded veil,
instances, will afford all the
f an ordinary respirator.

st beneficial, however, of all these
s to relieve weak or diseased lungs,
aling Apparatus; an invention
se the inspiration and expiration
lungs, and of which we give an
n under the head of Consumption.



THE INHALER.

desideratum in phthisis and dis-
lungs, is to prevent the air escap-
the organ in greater volume and
time than that in which it is in-
other words, the normal con-
the air-passages having been
disease, the air from the lungs escapes faster than it enters: the object required, then, is something which will impede the expiration, so as to equalize the expirations with the inspirations. This much-needed object has been effected both in the apparatus we have already described under Consumption, and in the much cheaper and very useful inhaling tube, of which we give an illustration, and which is only manufactured by Mr. Lowe, Parmaceutical Chemist, Stafford Street, Old Bond Street.

As an artificial respirator, by which the normal condition of the air-tubes is recovered while it is being used, we recommend the inhaling apparatus of Mr. Lowe with the utmost confidence. The one of which we give a cut is simple in construction, fully answers the object for which it is intended, and only requires the patient to inhale and expire through it for eight or ten times a minute, with his lips closely applied to the mouthpiece, to effect the object aimed at—that of fully distending the lungs, and slowly expiring the air received. This process, which may be performed in bed, or at any time of the day, should be repeated for a few minutes every six hours, gradually increasing the inspirations from five minutes till the patient is enabled to use the tube for half an hour at a time. When that maximum has been attained, a decreasing process should be adopted, till the patient arrives at the three or five minutes at which he started. In consumption, and in the asthma of old age, the use of Lowe's Inhaling Tube will be found of real benefit, especially where all its directions are fully complied with.

RESPIRATORY MURMUR. — A term used in auscultation, and signifies a sound made by the passage of the air through the various structures of the lungs, both in inspiration and expiration. These vary in different parts of the chest, and whether heard by the ear applied to the neck, the breast, or ribs, or noted through the stethoscope, have distinct sounds, to which distinct terms are given. See STETHOSCOPE.

RESPIRATORY ORGANS.—These consist of the larynx, trachea, the bronchi, or air-passages; the lungs, and their lining membrane, the *pleura;* the intercostal muscles, and the diaphragm. Each of these parts is liable to disease, such as Laryngitis, Croup, Bronchitis, &c., which see.

REST is as necessary to the health of the body as food, light, and air. How much absolute rest of body and mind, such as only sleep can give, is necessary for the recovery of muscular elasticity and nervous energy, must depend greatly on the age of the person, and the amount of labour taken. Some men are as refreshed after four hours' sleep as others with six or seven; in such cases, temperament has much to do with the benefit derived from the shorter term. As a general rule, the time devoted to repose should not be less than five hours, and need seldom exceed seven. The man who retires to rest before midnight will require less repose than he who makes it dawn before he seeks his bed. The hours of rest, like the hours set apart for meals, should be punctually adhered to. Much of the boasted health of a country life depends upon the regularity, not only in the hours of labour and refection, but of repose also.

RESUSCITATION.—The process of restoring a person apparently dead to life, whether the apparent death is the consequence of drowning, hanging, or suffocation from noxious gases.

RETCHING.—The act of vomiting, or rather those impotent strainings when the stomach is either empty, or the amount in it too small to be ejected by the force of the abdominal muscles. As such spasmodic actions are extremely exhausting, it is always best to give the stomach something to throw up, either simple warm water, or, if a crude or poisonous substance is in the stomach, an emetic. Seven or 8 drops of hydrocyanic acid, or 10 drops of laudanum, in water, will sometimes afford immediate relief; but in general, 1 or 2 half-pints of warm water will be found the best remedy for ordinary cases of dry retching.

RETE MUCOSUM.—A name given by anatomists to the adipose tissue lying directly under the true skin, or *dermis*—the substance in which the colour resides which distinguishes the different races of men.

RETINA.—The disc into which the optic nerve expands, at the posterior part of the globe of the eye; the camera obscura, on which external objects are printed as in a photograph, though almost instantly obliterated to make way for the next picture on which the mind looks.

That a *veritable picture is stamped* on the retina modern science has placed beyond dispute by the discovery that the *eye of a* dead man, if examined before decomposition sets in, will be found to contain impinged upon it a truthful image of the last object on which the person in life had gazed. The discovery of this wonderful fact has led to the suggestion of examining the retina of a murdered man to obtain a proof of the last person on whom the victim looked. The more intensely the mind is influenced in its last moments, the more vivid is the image left on the optic nerve. See EYE.

RETORT.—A chemical vessel, made of glass or iron, of a globular form, having a long tube running obliquely from its upper extremity, which is attached to the neck of the receiver. The retort is sometimes made with an opening at the top with a stopper, for the introduction of articles into the body of the vessel, the tube also being occasionally supplied with a tap. When made of glass, a spirit lamp is usually employed to boil the fluid to be distilled or rectified.

RETROVERSIO UTERI.—A turning backwards or retroversion of the uterus, or womb; a condition which sometimes occurs in pregnancy, leading to very serious consequences. See WOMB, DISEASES OF.

REVULSION.—The forcible drawing away of the humours from one part to another of the body. The term is now seldom used in a medical sense.

REYNOLDS' SPECIFIC.—An empirical medicine for the cure of rheumatism, which owed its entire efficacy to the large quantity of colchicum contained in the mixture. This specific was made by macerating colchicum root in sherry for several days, straining the mixture, and adding syrup of poppies, and a small amount of rum, or other spirits, to prevent fermentation.

RHAMNUS CATHARTICUS.—The botanical name of the plant known as Purging Buckthorn. The only preparation of this useful but powerful vegetable is the syrup, which is made by boiling the juice of the buckthorn berry with ginger, allspice, and sugar, till of a proper consistency, straining, and adding a few drachms of spirits to each quart of the syrup, to prevent fermentation. As a strong purgative, the dose of the syrup is from 2 drachms to 1 ounce, and for a child of from three to six years old from half a drachm to a teaspoonful.

RHEIN.—An acid principle obtained from rhubarb by the aid of nitric acid.

RHENISH WINE.—A light German wine, and one of the most esteemed of the

Rhine wines, and, being cool and acid, is sometimes of importance to the invalid to whom the stronger wines of Spain and Portugal are forbidden.

RHEUM.—A defluction from the nose; a discharge of viscid humours from the head.

RHEUM.—The Latin name of the several varieties of the medicinal rhubarb.

RHEUMATISM.—There are few diseases more universally familiar in this country than that which we now proceed to describe. Rheumatism presents itself to our notice in two forms,—the acute and the chronic; the latter giving rise to articular and muscular rheumatism, or rheumatism affecting the joints and ligaments, and that form of it attacking the fleshy or muscular parts of the body. Before we proceed to either of these diseases, however, each of which has two forms, the acute and the chronic, it will be necessary to show what affection might be mistaken for rheumatism, and in what the one differs from the other, or those signs by which the complaint under notice may be distinguished from others. In the first place, the only disease that can be confounded with rheumatism is gout; and though on close observation the characteristics of the two are very different, yet on a cursory view they seem so alike, so close in the resemblance, that one form has been actually named rheumatic gout.

Both gout and rheumatism are caused by a certain contamination of the blood, which seems to be loaded with a morbid poison. Both diseases affect the joints, only that gout attacks the small ones, such as the toes and fingers, while rheumatism invades the large articulations, as the knees, hips, and shoulders. In gout, uric acid may always be detected in the *blood*, while it is deficient in the blood of rheumatic patients; at the same time it is deficient in the urine in gout, and always present in that secretion in rheumatism. Gout seldom appears before the age of puberty; on the other hand, rheumatism frequently attacks children of very tender age. Gout is marked by a vivid redness of the part affected; rheumatism is often unattended by external inflammation. Gout, again, only attacks one joint at a time; rheumatism may attack two, or more. The former terminates in the itching and scaling of the cuticle; effects from which the latter disease is free. And, finally, rheumatism is always characterized by a sour perspiration, smelling like vinegar.

The *exciting cause* of rheumatism is cold or wet applied to the body when in a state of heat; or exposure to cold north or north-easterly winds; remaining long in wet clothes, or sleeping in a damp bed.

ACUTE RHEUMATISM, OR RHEUMATIC FEVER.—*Symptoms.*—These commence with a dull, aching pain, increasing in intensity till it becomes sharp and lancinating, affecting either a part of or the whole body. The pain may come on suddenly, or it may follow after cold shiverings; in either case, the pain felt is increased by every motion of the body or affected parts, and by pressure even of the bedclothes. In some cases, however, the pain is relieved by pressure gradually applied. The face is flushed, the tongue white, and the pulse full and bounding; the urine is high coloured, small in quantity, and loaded with a brick-coloured sediment, which soon forms a thick precipitate; a dense perspiration breaks out over the body, bathing the patient as in a bath, and emitting the characteristic sour smell. In some cases there is much swelling, or *œdema*, causing the part to pit when pressed with the finger. The pain, less severe about midday, increases towards night, and again remits in its intensity as morning approaches. While the pain is confined to the joints there is little risk with this form of the disease, but when it is extended over the whole body, and there is general *œdema* from effusion in the cellular tissue, there is much danger, and some risk of the heart being affected by the disease.

The *treatment* of rheumatic fever demands both care and promptitude. If the patient is young and robust, from eight to ten ounces of blood should be extracted from the arm; but this should be done in the earliest stage of the attack, and the bleeding followed by a warm bath, in which the patient should remain for seven or ten minutes, but not longer, and then be put to bed, when the following powders and mixture are to be given till the bowels have acted, and the pain and perspiration begin to abate.

Take of—

Powdered jalap . . .	1 drachm.
Cream of tartar . . .	2 drachms.

Mix, and add—

Calomel	18 grains.

Mix thoroughly, and divide into six powders: one to be given directly, and repeated every three hours till the bowels act, when they are to be discontinued.

Take of—

Powdered nitre	2 scruples.
Tartrate of antimony	3 grains.
Camphor water	6 ounces.
Laudanum	1½ drachm.

Mix: two tablespoonfuls to be given directly, and repeated every two hours for three times. After the third dose, *one* tablespoonful is to be given every two hours. When the acute pain has been subdued, and the perspiration reduced, the following mixture may be taken every four hours during the waking hours, and the annexed drink partaken of freely as a beverage whenever any fluid is required.

Take of—

Bicarbonate of potash	2 drachms.
Carbonate of soda	1 drachm.
Mint water	6 ounces.

Dissolve: half a wineglassful, in the same amount of cold water, to be taken for a dose three or four times a day.

Acid Beverage.—Dissolve two drachms of cream of tartar in a quart of boiling water, and add the juice of four lemons, and as much lump sugar as will make the whole palatable. To be drunk when cold as often as desired, or as may be necessary.

As the patient improves, the first mixture must be gradually diminished, by giving it only every four, six, or eight hours, and finally only once a day, and that at bed-time. A warm bath should be taken when the patient is again able to leave his bed, the body being well rubbed with dry towels on his coming from the bath.

During the progress of the disease, the patient's diet must be low and unexciting; his room should be kept warm and well ventilated, and care taken to protect him from the access of all draughts, cold, or moisture. It should be borne in mind, that when the pain is very acute, and the slightest motion causes the patient acute agony, it will be better to suspend the action of the bowels till the acuteness of the pain has abated before distressing the sufferer by medicine, which would put him to racking pain by having frequently to leave his bed. Some practitioners consider it necessary to administer colchicum or guaiacum to insure the perfect eradication of the disease, but in general the treatment given above will, with an embrocation of opodeldoc and hartshorn, be found sufficient to effect a cure.

Chronic Rheumatism.—When rheumatism once assumes a chronic form it is extremely difficult to eradicate, flitting about to all parts of the body in the most remarkable manner, and, having induced heat, pain, and swelling in one joint, will, in the most capricious manner, fly to a distant part, produce a like amount of mischief there, and then, without notice or suspicion, trip back to its original quarters. Chronic rheumatism may be either the result of the acute disease, or it may arise without any particular cause. As we have already said, the most frequent form in which chronic rheumatism shows itself is as articular and muscular rheumatism, both of these, like constitutional rheumatism, having an acute and a chronic form; but as the first, in either case, is treated like all acute inflammatory diseases, it is quite unnecessary to enter upon the management of either, simplifying our subject by proceeding to the consideration of the more general forms, those of—

1st. *Chronic Articular Rheumatism.*—When this disease follows an acute attack it generally falls on the weakest joint, where probably some stiffness or *œdema* has been left; or if it attacks for the first time, it invades a part weakened by accident, or the articulation of a limb exposed to cold or wet, commencing with heat, tenderness, and pain, and with more or less of swelling.

Treatment.—When there is much pain and swelling, six or eight leeches should be placed round the joint, and the bleeding encouraged by encircling the part in a large hot bran poultice; or, in default of leeches, cupping-glasses or a blister should be laid over the joint, and one of the annexed powders, and a dose of the accompanying mixture, taken in the manner prescribed below. Take of—

Dover's powder	½ drachm.
Powdered nitre	1 scruple.
Calomel	12 grains.

Mix intimately, and divide into six powders: one to be taken every four hours.

Take of—

Powdered guaiacum	1 drachm.
Ammoniated tincture of guaiacum	6 drachms.
Powdered gum arabic	1 drachm.
Camphor mixture	5 ounces.

Mix the gum and powdered guaiacum in a mortar, and make into an emulsion with a little of the camphor water; then add the tincture, shake well together, and finally mix the rest of the camphor water to make a six-ounce mixture. Two table-

to be taken every four hours, an
re or after each powder.
der forms of the disease, a poul-
ual parts of flour and mustard,
by an embrocation composed of
rts of camphorated oil, turpen-
tshorn, and laudanum, or equal
podeldoc and laudanum, rubbed
the part, but always in one
, three times a day, and keep-
oint enveloped in flannel, will in
s be found sufficient to effect the
ent of the disease.

chronic cases of rheumatism of
, great benefit will be found from
of vapour and sulphur baths,
those who possess the means of
, the thermal springs of Aix-la-
and Carlsbad will be found of
benefit.

are two remedies which, as the
ortant of all, we have left to the
remost of these, in all chronic
heumatism, we regard the Turk-
eating bath, as an agent that no
ted with this disease should neg-
sort to; the next, and a remedy
nd well-established value, is the
alvanic chain and belt, invented
Pulvermacher, of Oxford Street.
ctrical chains, by keeping up a
us and mild current of galvanism
the joint, stimulate the part
manently than could be effected
edicinal application that could be
and if occasionally worn for a
s, and the joint stimulated with
c and friction night and morn-
be attended with the happiest

uscular Rheumatism.—This form
ease may attack the fleshy part of
ion of the body, and may be at-
ith intense heat, pain, and red-
there may be only the pain, and
llid appearance of the cuticle.
first of these forms, a warm
ion, made by rubbing down two
of opium in a pint of boiling
d adding two drachms of sugar of
he mixture, makes an excellent
application, the part being
with this warm lotion, by
piline, till the pain is subdued.
e surface, however, is cold and
pplication of mustard and flour,
y, will often afford benefit; or a
timulating embrocation may be
for the same purpose; when
wever, fail, *urtication*, or tingling
with nettles, has been adopted
with good results. Some surgeons, however, have more faith in *acupuncture*. A plan still more efficacious than either of these, and which, in all old-standing rheumatisms and lumbagoes will be found of service, is to rub the part well with camphorated oil and hartshorn, cover the wet place with a piece of brown paper, and then, with a flat iron, made tolerably warm, iron over the paper for some five or seven minutes, or for as long as the patient can bear the heat that is sent through. We recommend this plan as a means of almost certain relief.

Whichever of these measures is adopted, some internal remedies must be at the same time resorted to, and where the pain is not excessively severe, the only addition required to the fomentation or the embrocation is a small teaspoonful of sulphur in a cup of milk night and morning, and 5 grains of Dover's powder, and 3 grains of calomel, at bedtime for one or two nights. Where the case is more obstinate, one of the following powders should be taken in treacle or honey every six hours, and the composing powder at bedtime. Take of—

Sublimed sulphur . .	4 drachms.
Peruvian bark . . .	3 drachms.
Powdered ginger . .	1½ drachm.
Powdered guaiacum .	1 drachm.
Powdered nitre . . .	2 scruples.

Mix thoroughly, and divide into six powders.

Composing Powder.—Take of—

Dover's powder . . .	10 grains.
Antimonialis	4 grains.
Calomel	2 grains.

Mix: to be taken before going to bed.

In all cases of muscular or articular rheumatism, friction, if merely with simple lard or oil, is an agent that must never be forgotten, as the happiest results attend its use, especially when accompanied with such an embrocation as the following. Take of—

Camphorated oil . .	2 ounces.
Oil of amber	2 drachms.
Tincture of cantharides	6 drachms.
Compound soap tincture	6 drachms.
Spirits of hartshorn .	2 drachms.

Mix: to be rubbed into the part twice a day.

The value of lemon juice as a remedy in rheumatism demands its occasional employment in all forms of the disease. The best mode of giving it is as a beverage, in the manner explained under Acute Rheumatism, which see. All remedial means advised in the former section of this disease are to be adopted in this form,—such as the vapour bath, the mineral and Turkish baths,—while as respects galvanism, in no condition of the body from rheumatism has that agent so marked an effect as in that of muscular rheumatism. The use of Pulvermacher's chains will, therefore, be found to be attended with very positive effects. From the *metastasis*, or changing nature of this disease, rheumatism, as we have already shown, is remarkably liable to fly from one organ to another. On this account, great danger sometimes attends this disease, rendering much care necessary in its treatment, as from the sudden application of cold it may be driven from the surface, and made to settle on the heart or stomach. The persons subject to rheumatism should always be most particular in the warmth and dryness of their clothing; in keeping the skin in a soft and healthy state, either by daily friction with a dry towel or by means of a flesh-brush; in taking a hot or Turkish bath on the first symptoms of an attack, in a strict attention to the lightness and nutritious character of their diet; and in avoiding malt liquors, and confining their beverage to cold spirits and water, without sugar, when a stimulant is required.

RHODIUM.—A pink-coloured metal, discovered by Dr. Wollaston. Also the name of a powerful essential oil, used by ratcatchers to draw forth the vermin they seek to destroy. As the cat becomes intoxicated with valerian, performing the most extravagant antics over and around the plant, so a rat, excited by a drop or two of rhodium placed near its hole, will in a few minutes come boldly forward to imbibe, by closer contact, the odour so fascinating to its nature. The smell of rhodium is something between that of fenugreek and aniseed.

RHŒADUS.—The botanical name of the Red Poppy; only used for syrup.

RHŒADOS SYRUPUS.—Syrup of red poppy. The syrup is only used in pharmacy to colour mixtures, possessing no medicinal property of its own, and being very thick and sweet. About three drachms are employed both to sweeten and colour a six-ounce mixture.

RHOMBOIDEUS.—The name of a square-shaped muscle of the back, to move the scapula, or shoulder-blade, and arm.

RHONCHUS.—A term used in auscultation, signifying a sound made by the passage of the air along the bronchial *tubes*, when those passages are either contracted by disease, or a fluid of different density is thrown out. The English of this word, and that which expresses most accurately its peculiar sound, is a *rattle*, to which the French give the name of *ralé*, and our physicians, the Latin signification *rhonchus*. Rhonchi occur in three places,—in the air-cells, the bronchial tubes, and in cavities formed in the substance of the lungs.

RHUBARB (*Rheum Palmatum*).—There are three varieties of this most useful plant in general use for medicinal purposes, namely, the East Indian, the Turkey, and the English rhubarb. These names, however, are very incorrect: the rhubarb called Indian is brought from Tartary; and the finest variety, misnamed Turkey, is exported from Asiatic Russia, but coming through the Levantine ports, it has obtained the prefix of Turkey rhubarb.

The stem and roots of this plant—which grows native in Asia and Arabia—are at the proper season dug up, and cut into rhomboid pieces about three inches square, and a hole being drilled through the centre of each, they are strung on lines from tree to tree, or from poles fixed in the ground, and allowed to hang in the sun and wind till thoroughly dried; they are then taken down, all the finest, unblemished pieces selected, and packed in cotton wool in small chests, and thus exported under the name of Turkey or Russian rhubarb. Some forty years ago it was discovered that the common rhubarb of this country, if properly cultivated, and dried in the same manner as the foreign, yielded a medicinal article having all the properties, but in a much weaker degree, of the Asiatic drug. From the large quantity of gummy and woody matters it contained, however, it was never largely used as a medicine, though it became a valuable article in the hands of the nefarious dealer as a means of adulteration. The powder of the English rhubarb, being more beautiful in colour and brightness than the best Turkey, was largely used to mix with the powder of the East Indian, the product being unblushingly sold as the powder of the finest Turkey.

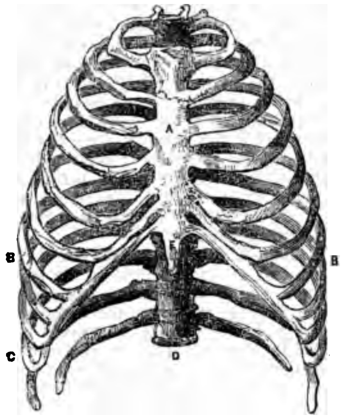
Rhubarb is also sent from China and Arabia, but neither samples are held in much esteem. The principal varieties are the *Rheum palmatum*, and *Rheum undulatum*, both of them belonging to the Natural order *Polygonaceæ*.

MEDICAL PROPERTIES AND PREPARATIONS.—Rhubarb acts on the system as a tonic, astringent, stomachic, laxative, and purgative, according to the dose and style of administering. Of all the forms in which rhubarb is given, that of the powder is the most universal, the dose for an adult being from 10 to 30 grains, while for children from one to two years, the proportion is from 2 to 6 grains. The preparation next in vogue is the tincture (*tinctura rhei composita*), a combination of rhubarb, cardamoms, ginger, coriander seeds, and saffron: the dose as a stomachic is from 1 to 2 drachms, and in cases of diarrhœa from 6 drachms to 1½ ounce; for children under three years the dose is from 20 to 60 drops. Next to the tincture in importance is the preparation known as the compound rhubarb pills (*pilulæ rhei composita*), made of aloes, rhubarb, myrrh, Castile soap, and oil of peppermint; the adult dose being from one to three pills, or from 5 to 15 grains of the mass. The extract of rhubarb (*extractum rhei*) is only used, in combination with other ingredients, in the composition of stomachic or aperient pills; its dose is from 10 to 20 grains. There is another preparation, but never kept ready made, called the infusion, only employed as a vehicle for tonic mixtures. An excellent medicine, called the tincture of rhubarb and aloes, composed of those two articles, with ginger and canella alba, found a place in the old Pharmacopœias, and which, though now expunged, was an excellent preparation as a tonic in chlorosis and other uterine diseases. One of the most elegant and grateful forms in which rhubarb can be administered is in the shape of that far-famed powder known as the celebrated Dr. Gregory's Mixture, and now at last admitted into the British Pharmacopœia. This powder, so often recommended in the present work, is called the compound rhubarb powder (*pulvis rhei compositus*), and is composed of—ginger, 1 part; rhubarb, 2 parts; and calcined magnesia, 6 parts. The dose is from one drachm to half an ounce, either in plain or peppermint water. Rhubarb, in combination with grey powder and scammony, makes an excellent medicine for children, on whom it acts in that form both as an alterative and a purgative. The primary action of rhubarb is that of an aperient, and its secondary action that of an astringent; hence its value in all relaxations of the bowels, the first effect carrying off the cause of irritation, and the second arresting, by the drug's astringent properties, all further action of the bowels, at least for some time. A useful preparation for very young children is the syrup of rhubarb (*syrupus rhei*), a teaspoonful of which will often act sufficiently on the bowels of young children.

RHUS.—An order of plants to which the *Rhus toxicodendron*, or poison oak, belongs; a plant possessing many characters resembling strychnia.

RHYTHM OF THE HEART.—To understand this professional term, it must be borne in mind that the auricles and ventricles of the heart contract alternately, the *systole* or contraction of the one being synchronous or simultaneous with the *diastole* or expansion of the other. The auricles first contract, then the ventricles, the contraction of the latter being followed by a short pause before the auricles in their turn expand; this sequence of actions is called the heart's rhythm, or harmony.

RIBS.—The bones which encircle the chest, and, attached behind to the spinal column, and in front to the breast-bone, form that cage or open protection for the lungs and heart which anatomists have called the *thorax*. The ribs, in Latin denominated *costæ*, are those flat and hoop-like bones which girdle round the upper portion of the trunk, commonly called the chest. There are twelve ribs on each side, divided into what are called the true and the false ribs. The true ribs are *seven* in number, and are so called from the fact that they have a bony articulation at each end, being united behind with the spine, and articulated in the front with the *sternum*, or breast-bone. The false ribs, on the contrary, of which there are *five*, are so named because, though having a bony connection behind with the spine, they have only an indirect attachment, by means of a cartilaginous belt, with the breast-bone. The necessity for, and the beauty of this arrangement, will be better understood by the following cut, and by our description of this masterly arrangement of bones, so admirably adapted to protect the organs they contain, afford insertion to a number of muscles, and by tapering off above and below, assist in closing in the cavity of the thorax. The ribs belong to what are denominated the flat bones, and though of nearly the same breadth and thickness, differ materially in their length,—the true ribs forming the segment of a circle, each one, to the seventh or last, increasing in the dimension of its arc, while, on the contrary, the false ribs gradually diminish, till the twelfth or last bone becomes a mere part of a circle, too short even to receive an attachment with the cartilage that unites the other four false ribs, and, being perfectly loose in all but its union with the spine, is called the *floating rib*. Along the inner and lower margin of each rib runs a shallow groove or channel, in which the artery and vein of the part protected by the bone proceed to their several destinations. The special difference between the true and the false ribs lies in this, that the first form a complete half-circle, having a bony attachment behind and in front, while the second, or the false, only form a small part of a circle, are united together and attached to the breast-bone by means of a flat belt of cartilage, called the *ensiform cartilage*. The ribs not only protect the heart and lungs, but play an important part in the function of respiration, a duty they are enabled to perform from the loose nature of their articulation, both with the spine and the breast-bone, enabling the whole series of bones to rise and fall in obedience to the muscles attached to each, and called the *intercostal* muscles, which at every inspiration draw up the whole framework of bones, giving the lungs greater room to expand, and thereby inflating every part with atmospheric air, and again, by means of other muscles of the back, powerfully aided by the diaphragm, or midriff, pull down the whole series at every expiration.



THE RIBS.

A, Sternum, or breast-bone. B, The Seven True Ribs. C, The Five False Ribs. D, The Spine. E, the Ensiform Cartilage, or continuation of the Sternum.

The mechanism of the thorax is one of the most perfect and admirable, in all its parts and appliances, to be found in the human body; for, independent of its uses, it combines extreme lightness with extraordinary strength, and by the moveability of the bones, their expansion to the seventh and their diminution to the twelfth rib, and the elasticity imparted to them from the large amount of cartilage entering into their union, a power of resistance is imparted which, had the ribs been fixed, could never have been attained, and must have resulted in perpetual fracture from the most trivial accident; but by this happy medium of bone and cartilage, with a constant and moveable joint, a large amount of resistant elasticity is secured. Though by their motion and formation they are capable of resisting very great pressure, it sometimes happens, from sudden blows, falls, and other accidents, that these bones receive serious injury, such as fracture.

RIBS, BROKEN.—Elastic and resistant as the ribs naturally are, both by their shape and the peculiarity of their attachments, they are sometimes seriously injured, either by displacement or fracture; the latter, however, is by far the most frequent form of accident met with, and may result from a fall, a kick, or a sudden blow, particularly when the arms are raised.

The SYMPTOMS of a broken rib are a sharp, acute pain in the part, increased on every inspiration of air, or by any muscular motion; the pain and difficulty of breathing are circumscribed, and the dimensions of the injury can often be covered by one or two fingers.

The TREATMENT of a broken rib is remarkably simple. A broad bandage of flannel or coarse linen, about half a yard deep, passed twice round the entire chest, and firmly secured, is all that is requisite, care being taken that the patient draws a deep and full inspiration before applying the bandage; by doing so the edges of the broken bone will be drawn as nearly as possible into their natural position, in which state the bandage will then retain them till the union between the broken bone is effected. A fortnight or three weeks is the usual time the bandage for such an injury should be worn, but this must depend on the age and strength of the patient. The common riding belt for gentlemen, made with four straps and buckles, is the best bandage for a broken rib that can possibly be used, and where it can be obtained, should ways be preferred. When the accident as been attended with much violence, is often necessary to bleed the patient fore the application of the bandage; ut as in all cases absolute rest for the st few days is necessary, and the lungs nd heart should be kept as quiet as ssible, it will be requisite, in addition to st in the horizontal posture, and to guard ainst the risk of inflammation of the *leura*, to give such a mixture as the llowing. Take of—

Powdered nitre . . .	½ drachm.
Tartar emetic . . .	3 grains.
Mint water	5½ ounces.
Syrup of red poppies .	2 drachms.
Laudanum	2 drachms.

Mix: two tablespoonfuls every four hours r the first day; two every six hours for he second day; and the same quantity wice a day afterwards for the few times may be necessary; a dose of aperient edicine being given on the fourth or fth day after the accident.

Some surgeons, disapproving of the andaging plan, endeavour to fix the roken rib by strips of adhesive plaster; ut experience will not warrant our ecommending such a method as worthy f adoption—at least, by non-professional ersons.

RICE (the *Oryza sativa* of the otanist) is, next to wheat, the most aluable grass grain we possess, in regard o its general utility as an aliment. hough only used in this country as an rticle of luxury, or, at best, only as an djunct to food, rice forms the staple of xistence, the staff of life to millions of Asiatics, to whom wheaten bread is unnown. Though in all probability a ative of China or Hindostan, rice is ultivated as largely in the West as in he East, between the tropics, and wherever, in fact, there is sufficient heat nd moisture; for, unlike the other ereals, rice requires an immense amount f moisture in its cultivation, almost growing in a swamp.

The proximate principles of rice are starch, fat, sugar, gluten, albumen, ellulose, and gum, with the customary water and mineral ashes. Possessing nly one half the quantity of gluten found in wheat, barley, and oats, rice annot be made, when reduced to powder, into dough, or, consequently, into bread; nd when used as an aliment, has, in onsequence, to be eaten whole, the grain being boiled. Rice, from the large amount of water which it absorbs, in the expansion of the grain in cooking, would become very hurtful to the stomach by the flatulence it creates. To counteract this effect the Asiatics mix a large amount of spice, such as capsicum or curry, with the food so prepared and consumed.

There are many varieties of rice in commerce; that cultivated in the United States, and known as Carolina rice, however, is considered as the best in all respects, besides being twice as large as the Chinese or Indian.

Rice in the husk, or before being thrashed, is called paddy, a name applied generally to the grain, and also to the swampy grounds in which it is planted, which are called paddy fields. In cases of diarrhœa or relaxation rice is a very useful and appropriate article of food, but whether used whole or in powder, it must be long and well boiled before being given to the invalid.

The Chinese and Mongolians distil a strong fiery spirit from rice, called arrack. Some people mix the spirit called toddy, obtained from the cocoa-nut tree, with the rice spirit, thereby adding to the potency, and, as it is thought, to the flavour of the arrack.

RICE.

RICINUS.—The botanical name of the plant which yields the oleaginous seeds from which are obtained, by expression, the unctuous fluid known as castor oil, the *palma Christi* of the old Pharmacopœia. See Castor Oil.

RICKETS.—A disease almost peculiar to childhood, depending upon the *want* of a due proportion of the mineral salts in the blood, in consequence of which impoverished state the bones in a growing child are deprived of their proper amount of earthy ingredients, becoming consequently soft and pliable, instead of being naturally firm and resistant.

Though properly a constitutional disease, rickets is regarded as a local evil simply because its effects are chiefly seen in the bones of the legs or arms. We have explained, under the head of Bone, and elsewhere, that if a bone is immersed for a few days in a mixture of muriatic acid and water, all the earthy salts will be extracted from its structure, and a substance like gutta percha, of the exact shape of the bone, only capable of being bent, doubled up, or extended, like Indian rubber, will remain. Such a condition, more or less supple, according to the amount of earthy matter contained in the cells of the organ, is the state of the bones in rickets, which, being deprived of their resistant properties, become unable to bear the weight and pressure of the body, give way, and are easily bent, twisted, or deformed.

The causes of rickets, though generally attributed to bad nursing, bad food, imperfect ventilation, and want of cleanliness, must be looked for in the constitution of the parents or that of the child, showing a want of those earthy particles or mineral salts which, under the head of Food, we have shown are so necessary to the health and stamina of the body. Defective assimilation of food is the professional term given as an explanation of the cause of this disease; the meaning of which is, that there is a deficiency of phosphate of lime, either in the food taken or in the system.

The symptoms of rickets are more passive than positive, and show themselves rather by their local than by their constitutional characters. The general effects, however, are a softness and flaccidity of the muscles of the body; a sallow, anxious countenance; a distended or tumid state of the abdomen, with turbid state of the urine, and though the appetite is good, the child gradually loses flesh and strength. The teething process is slow and imperfect, and the teeth, when formed, quickly decay, become loose, or fall out; the *epiphyses*, or extremities of the long bones, become spongy and swollen, the disease first showing itself at the wrists and ankles; and as the mischief advances, the long bones gradually give way, and bend under the weight of the body, and become twisted, and often most grotesquely deformed, by the action of the muscles, which, straining in contrary directions, produce that malformation which is generally understood by the name of rickets. In ordinary cases the legs only are deformed—bent out or inwards, or twisted in many forms; but in severe cases the bones of the spine also become softened, the vertebræ of the shoulders (dorsal) are displaced, producing a hump, while the breast-bone is thrown forward, forming what is called a pigeon-breast. The mental faculties do not generally suffer with the physical debility, but often shine out with unusual precocity and vigour.

Treatment.—As the cause of this disease is an absence of the mineral salts, the natural remedy for the case would seem to be to give the system those salts of which it stands in need, namely, the phosphates of lime and soda. The cure, however, cannot always be effected by these means alone, though given in constantly repeated doses; the restoration to health can only be attained by a steady and gradual system of dietetics and regimen. The first indispensable requisite is change of air, and, if possible, to the seaside; the use of cold salt-water baths; a daily friction with the hand, night and morning, for at least ten minutes each time, along the limb or part most affected; an abundance of milk, and a full and rich diet—animal and vegetable—with fruit; the patient in this instance being enjoined to eat the rind or skin as well as the fruit, and when the digestion is good, watercresses, radishes, salad, and any crude vegetable in which the mineral salts are in their natural abundance. Next in importance to fresh air, cold baths, friction, and abundance of food, rest in the horizontal position is absolutely necessary, the child never being allowed to stand, or bear any weight on its limbs, unless supported by splints and bandages, precisely the same as for a fracture, the limb, especially if it is the leg, being well rubbed, either with the bare hand or with a little lard or sweet oil.

Though the diet and regimen are the chief agents required in the treatment of rickets, some medicine is necessary, and of that we shall now proceed to speak. In the first place, cod liver oil, on account f the nitrogen or animalizing principle it ontains, has been greatly recommended n this disease, and there can be no doubt hat in cases of much debility it may be given with very great effect. The chief dependence, however, must be placed on he stimulating and tonic properties of ron, as prescribed below, with the saline powders following. Take of—

Steel wine	2 ounces.
Syrup of saffron . . .	2 drachms.
Mint water	sufficient to

make a four-ounce mixture. Mix, and for a child under *two* years, give half a teaspoonful every six hours; for a child between *two* and *six* years of age, a teaspoonful three times a day, and for a child between the ages of *six* and *ten* years, a dessertspoonful in water every eight hours. Take of—

Phosphate of lime . .	2 drachms.
Phosphate of soda . .	2 drachms.

Mix, and divide into twelve powders: one to be taken, dissolved in a little water, three times a day, for a child between *six* and *ten* years old; to all patients under *six*, *half* of each powder, dissolved in water or milk, is to be given twice or thrice a day.

Care must be taken with female children affected with rickets, to prevent, if possible, any malformation of the bones of the pelvis or hips, by keeping the child from running about, so as to ward off any undue weight on the bones of that part, and in all cases anticipating any malformation as far as possible by rubbing the limb, and applying splints to keep the bones from the action of the muscles.

Children who are old enough to eat raw vegetable matters should be given an abundant supply of such articles as lettuce, endive, young onions, watercresses, raisins, grapes, apples, gooseberries, with a due proportion of animal food, with plenty of bread, rice, potatoes, and milk frequently in the course of each day. This, with change of air, salt water bathing, and friction, will, if persevered in for a sufficient time, effect a perfect cure, by invigorating the constitution, and giving it back the salts of which it has been previously deprived.

RIGORS.—A term given by physicians, in their descriptions of fevers and inflammatory diseases, to those shuddering effects experienced by the patient in the back, commonly known as cold chills, and generally one of the earliest symptoms in the coming on of a severe attack of illness.

RIMA.—A slit or opening: an anatomical term applied to the narrow opening into the larynx, or organ of voice, which, bounded on each side by vocal chords, is protected above by the small oval cartilage called the glottis, the opening receiving the name of the *rima glottidis*. See LARYNX, and DIGESTION, *cut*.

RING, FIXED.—It sometimes happens that, by the subsequent swelling of the finger, the ring worn becomes fixed, and cannot be made to pass the joint. In such a case, if immersing the hand for some time in cold water, and then soaping the finger freely, will not allow it to be worked off, a piece of strong thread is to be wound from the tip of the finger up to the ring, under which the thread is to be passed, and then, by pulling the ring forward by the thread as it is gradually unwound, the ring is by this means very often brought off the finger without any trouble.

RINGWORM.—An obstinate cutaneous affection of the scalp, to which children are more subject than adults. This eruption appears generally, but not always, on the head in circular patches, or rings of a yellowish colour, the circumference of each patch being dotted with small vesicular elevations; the hair becomes discoloured, dry, and falls off; the disease in all its conditions being extremely contagious, and often running through a whole family and an entire school in a very short time. There are several varieties of this disease, the eruption in some being more elevated than in others, and of different colours, varying from brown to a light yellow. The seat of this disease is supposed to reside in the roots of the hair, and the eruption itself to be induced by poor or insufficient food, particularly a long-continued vegetable diet; hence the prevalence of this disease among the children of the poor, and its rarity among those of the well-fed and cleanly. The two most common varieties of this disease are the *pustular* and *vesicular*, the latter being the most easily treated.

The TREATMENT should commence by covering the part with a succession of warm bran poultices; the hair is then to be carefully cut quite close, both above and around the eruption. Some medical men have the entire head shaved, or only round the part, but this in some instances causes considerable irritation, and on that account is not always strictly necessary or advisable. The hair having been removed, and the ringworm cleaned and soothed by another poultice, it is to be dressed with the annexed lotion and ointment, and treated by giving one of the following powders every morning.

Lotion.—Take of—

Sulphate of zinc	1 drachm.
Elder-flower water	2 ounces.

Dissolve. Each eruption is to be bathed with a small quantity of this lotion morning and evening.

Ointment.—Take of—

Citron ointment	1 drachm.
Spermaceti cerate	7 drachms.
Creosote	15 drops.

Mix with a bone spatula, and every night, at bedtime, dress the ringworm with a little of this ointment, spread on lint, and the whole covered with a piece of oiled silk, a close-fitting nightcap retaining the dressing in its position. In the morning, on removing the dressing, the eruption is to be well washed with a sponge, warm water, and brown soap, the part dried, and then bathed with the lotion, the ringworm being exposed to the air till towards evening, when the lotion is to be repeated, and followed, when it has dried, by the ointment, this system being adopted every day till the disease is eradicated.

Powders.—Take of—

Powdered rhubarb, Powdered scammony, of each	12 grains.
Powdered jalap	24 grains.
Calomel	9 grains.

Mix, and divide into six powders: one powder to be given every morning to a child of from six to nine years of age, and *half* of a powder to a child from three to six years old; and from half a teaspoonful to a teaspoonful of milk of sulphur, according to the above ages, should be given once, or, where the disease is obstinate, twice a week. In scrofulous habits, and where there is much debility, steel wine, or quinine, with porter or wine, should be given constantly. Some medical men apply the nitrate of silver, or lunar caustic, both as a lotion and an ointment, to the ringworm, but, in general, the less painful and milder practice given above will answer the purpose; should it not do so, however, the other plan may then be adopted. In all cases the diet should be changed, and the patient fed on light and nutritious foods. So contagious is this disease among children, that the strictest attention is necessary in keeping the other juveniles of the family or school apart; care, too, must be taken that the comb, brush, soap, and towel employed for the affected child are not made use of for the others, but kept exclusively apart. See SCALD HEAD, and SCALP.

RISUS SARDONICUS.—A sardonic or convulsive laugh or smile,—a symptom, in some cases, of some vegetable poisoning: a ghastly convulsion of the muscles of the face,—a peculiar state of the risible muscles, which sometimes affects children who are threatened with St. Vitus's dance, or are irritated by worms, or labouring under some undeveloped affection of the brain or nervous system: the extraordinary grimaces which children sometimes make, without being conscious of what they are doing. Parents should at once take note of this sardonic smile, as it is called, in children, and have the cause investigated.

RIVER WATER. See WATER.

ROASTING.—As a means of cookery, this process ranks second to boiling. We have already spoken of the advantages and disadvantages of this method of cooking, under Food, which see. All that is now necessary to add to the subject is to impress on the mind of the reader that the escape of the juices of the meat while cooking is quite as detrimental to its quality as if the joint had been burnt or dried up, and that the best way to cook meat, and yet preserve all its juices, is to baste the roast from the beginning, or to encase the joint, as in the cooking of venison, with a layer of barley meal, browning the meat at the last minute, after the removal of the cake of meal.

ROBORANT.—Anything strengthening. *Emplastrum roborans* is the name of an adhesive plaster, made with the carbonate of iron, and commonly called "strengthening plaster;" its only claim to such a name, however, depends upon its adhesive property, and in its supporting the loins, or part to which it is applied, like a pair of stays.

ROCHE ALUM.—A rock alum, of a pinkish colour, brought from Syria, and used for the same purposes as the common Sulphate of Alum, which see.

ROCHELLE SALTS.—A cooling saline aperient, known in pharmacy as the tartrate of potass and soda, and being destitute of the bitter, nauseous taste of the principal purgative salines, is a very good and useful aperient, and may be given with great advantage to children and females, where moderate action on the bowels is required. The Rochelle salts—so named from the place where first crystallized—form the chief ingredient in the composition of a seidlitz powder, and when given to children, either in water or the infusion of senna, as a purgative, the dose is from 1 to 2 drachms, and for an adult, from 4 drachms to 1 ounce. See SEIDLITZ POWDERS.

ROE OF FISH.—The roes or milts of fish, though possessing the same properties as the flesh of the animal to which they belong, are in general less beneficial as an aliment to the invalid than the fish itself, being in many instances more difficult of digestion, a result consequent on the presence of a larger quantity of oil than the strictly muscular parts. The same objection applies to the sounds as well as the roes of fishes, and they should, therefore, only be partaken of by the robust and hearty.

ROLLER. — The name given by surgeons to a bandage rolled up and ready for use. A roller may be of any length or breadth. See BANDAGE.

ROSA.—The Rose, which see.

ROSACEÆ. — The Natural order of the genus of plants called Rosa, and which, in addition to yielding all the varieties of the rose, is the order to which the cherry, almond, peach, nectarine, plum, apple, quince, pear, mulberry, blackberry, &c., belong.

ROSAIC ACID.—An acid said to be found in the urinary deposit thrown down in some stages of fever.

ROSALIA. — The ancient name for scarlet fever.

ROSE. — The Scotch name for erysipelas.

ROSE, THE. — There are several varieties of this beautiful and universally prized flower, but only two of them are used in medicine—the large, full red rose, sometimes called the cabbage, but more properly known as the hundred-leaved rose (*Rosa centifolia*); and the common wild or briar rose, whose single petals are the blossomings of the oblong fruit known as "heps," or the dog-rose (*Rosa canina*). Both these varieties are employed medicinally, from their possessing astringent properties; the dried leaves of the *centifolia* being used to make the infusion (*infusum rosæ acidum*), prepared by pouring 10 ounces or half a pint of boiling water on 2 drachms of rose leaves, and when cold, adding 1 drachm of diluted sulphuric acid, — an extremely useful formula, either as a gargle, or as a vehicle for the exhibition of Epsom salts. A simple infusion of rose leaves, boiled with lump sugar, and properly skimmed, makes the article known as the syrup of roses (*syrupus rosæ*). A confection is sometimes made of the petals of the *centifolia* species; but the preparation in general use is made from the canine variety, and called the confection of the dog-rose, or heps (*confectio rosæ caninæ*), made by mixing the bruised fruit or heps with sugar. This preparation is sometimes used as an astringent electuary for children, in doses of 10, 15, or 20 grains from one to three years, and in quantities of from 1 to 2 drachms for adults, in cases of diarrhœa or dysentery.

ROSEATE POWDER.—A cosmetic, used principally by ladies to destroy the redundancy of hair which occasionally appears on the lip and chin. In its full potency this preparation is very dangerous, though it can be made of all strengths: the ingredients are the yellow sulphuret of arsenic, orpiment, or king's yellow, with quicklime and starch, the full strength being one part of the arsenic to ten of each of the other two.

ROSEMARY (*Rosmarinus officinalis*).—This strong, aromatic, and stimulating plant, so common in our gardens, was at one time in great esteem as a medicine in jaundice, flatulence, and affections proceeding from a torpid state of the digestive organs, but is now nearly expunged from practice as an internal remedy, and, indeed, hardly finds a place as an external agent, in the consideration of one medical man in twenty.

From the large quantity of essential oil yielded by the rosemary plant, and from its warm, aromatic, and stimulating properties, rosemary water may be employed with advantage as a carminative in cases of colic or flatulence. From its stimulating properties when applied externally, it forms an excellent remedy in cases of baldness, as in the following formulary. Take of—

Castor oil	1½ ounce.
Essential oil of bitter almonds	10 drops.
Oil of rosemary . . .	1 drachm.
Tincture of cantharides	2 drachms.

Mix. The roots of the hair are to be rubbed with this preparation night and morning.

ROSEOLA.—A name given to several slight eruptions of the skin, of a rose colour, chiefly occurring in children; and proceeding, as it does, from some crudity in the stomach or bowels, is usually easily corrected by a little mild aperient or common saline medicine, such as the following. Take of—

Infusion of senna . .	2 ounces.
Rochelle salts (in powder)	4 drachms.

Dissolve, and give for a dose from a dessertspoonful twice a day to a tablespoonful every eight hours, from four to eight years, according to the age. See SKIN, DISEASES OF.

ROSIN.—The hardened exudation of the pine trees, the whole family of the firs yielding it. There are three kinds of this article in commerce—the black, the white, and the yellow. Rosin is only used in pharmacy in the preparation of some few ointments and plasters, to which it imparts tenacity and adhesion.

ROTATOR.—A muscle of the lower extremity, whose function is to roll the thigh outwards.

ROTA WINE.—This is an agreeable, rich, sweet wine, produced in the south of Spain, and well adapted for invalids.

ROTULA. — Another name for the Patella, or Knee-cap, which see.

ROUGE. — A cosmetic and pigment produced from cochineal. This expensive article, once an indispensable part of a lady's toilet, was formerly obtained by precipitating the colouring matter from a decoction of safflower.

ROUND WORMS. — The *lumbrici*. See WORMS.

ROUSSEAU'S COUGH DROPS.—A once famous French remedy for colds, coughs, and hoarseness: it consisted of honey, water, alcohol, and opium, all boiled together till a sort of syrup of opium was obtained. The uncertainty of the strength, however, made it always a hazardous nostrum.

ROYAL STITCH.—The name of an old surgical operation, by which an *inguinal hernia*, or rupture, when once reduced, may be prevented from recurring a second time, by the simple expedient of exciting an inflammation which will cut off all connection between the sac of the hernia and the abdomen, so that the bowel can never again pass down. This result was effected by passing a ligature under the neck of the sac, and then tying it, thus exciting a permanent adhesion of the walls of the bag or sac of the hernia.

RUBEFACIENTS are those substances which produce a certain amount of steady irritation short of blistering, and in cases of asthma, cold, and rheumatism, are particularly efficacious. This effect may be obtained by a poultice of equal parts of mustard and flour, or one of mustard and three of flour; or by an embrocation of mustard and turpentine, in the proportion of one of the first to eight of the last; or by a liniment of hartshorn and oil in equal parts. For sprains and stiff joints, such a rubefacient as the annexed will be found highly useful.

Dissolve by heat 2 drachms of camphor, cut small, in 3 ounces of olive oil, and add 1 ounce of turpentine, with oils of rosemary and amber, of each half an ounce; and lastly, spirits of hartshorn, 1 ounce. This powerful embrocation may be rubbed well in twice a day, and the wetted rag laid over the part, and tied on with a bandage.

Another form of counter-irritation, or rubefacience, is obtained by what are called warming plasters,—a composition of litharge plaster, Burgundy pitch, and blister plaster: these, when applied to the chest, are admirable means of relieving the tightness of asthmas, bronchial coughs, and long-standing colds, and may be worn without removal for several weeks.

The croton oil has been sometimes used as a rubefacient, a few drops being rubbed into the part with a bit of lint every day for two or three days, till a small crop of pimples is established. See COUNTER-IRRITATION.

RUBIA TINCTORIA.—The botanical name of the alkanet root, used in pharmacy for colouring oils and tinctures.

RUBIOLA. — The professional name for Measles, which see.

RUBULA.—A name given to the disease called the Yaws, which see.

RUE (botanically known as the *Ruta graveolens*).—The intensely rank odour of this plant, with its tenacious, bitter taste, has caused the virtues of a really excellent herb to be greatly neglected; for as a bitter stomachic, carminative, and anthelmintic, it stands foremost among all our simples. The principal uses to which rue is now put is as a stomachic bitter, in the form of rue gin, prepared by macerating the fresh leaves for seven or eight days in that spirit, 2 or 3 drachms of which, taken an hour before dinner, will be found not only to promote appetite, but strengthen and give tone to the stomach. The ordinary form, however, in which rue is given to young people is in infusion, when, if administered the first thing in the morning for several days in succession, and then followed by an aperient powder, it will be found most beneficial for children in all cases of worms. To females, either alone or in combination with pennyroyal, it acts as a very effectual emmenagogue. The powdered leaves and the expressed juice of the plant are sometimes prescribed; but the best form in which it can be taken for old or infirm persons, is as rue-gin, and for children and females in the form of an infusion. Rue is said to have the power of counteracting the danger arising from the bite of any venomous reptile, the part being dressed with the juice of the plant, and the patient given a few of the fresh leaves to eat. The celebrated antidote of Mithridates', of which he daily took a certain proportion to render him insensible to every species of poison, is supposed to have consisted chiefly of rue, with walnuts, figs, juniper berries, and a little salt, beaten together, and taken every morning fasting.

RULES TO BE OBSERVED IN DRESSING WOUNDS, &c.—A few necessary directions to prevent confusion and embarrassment in applying surgical dressings will not be out of place in this part of our work, though under Wounds something more explicit will be given.

Always prepare the new dressing before removing the old one. Always have hot and cold water at hand, and a vessel in which to place the foul dressings. Have one or more persons ready to assist, and tell each person what they are to do before you commence (it prevents confusion): thus,—one to wash out and hand the sponges, another to heat the adhesive plaster, or hand the bandages and dressings, and, if requisite, a third to support the limb, &c. Always stand on the *outside* of a limb to dress it. Place the patient in as easy a position as possible, so as not to fatigue him. Arrange the bed after changing the dressings; but in some cases it will be necessary to do so before the patient is placed on it. *Never be in a hurry when applying dressings; do it quietly.* When a patient requires moving from one bed to another, the best way is for a person to stand on each side of the patient, and each to place an arm behind his back, while he passes his arms over their necks; then let their other arms be passed under his thighs, and by holding each other's hands the patient can be raised with ease, and removed to another bed. If the leg is injured, a third person should steady it; and if the arm, the same precaution should be adopted. Sometimes a stout sheet is passed under the person, and by several people holding the sides, the patient is lifted without any fatigue or much disturbance.

RUM.—This well-known West Indian spirit, distilled from molasses and coarse sugar, is, when new, an extremely objectionable article to use, and should be carefully shunned by all till fully mellowed by time: when properly diluted it becomes a valuable stimulant, when medicinally employed, and is besides a popular remedy, mixed with honey or milk, or beaten up with eggs, in cases of cold, hoarseness, cough, or influenza.

RUMEX.—A family of plants to which the sorrel belongs.

RUPIA.—A vesicular eruptive disease of the cuticle. See SKIN, DISEASES OF.

RUPTURE, professionally called hernia, is an accidental disease, consisting, as the name implies, of the giving way, tearing, or sudden enlargement of some aperture, by which some internal part or organ is forced out through the space so made; such accidents being chiefly confined to the abdomen.

Anatomically considered, a rupture consists of a tumour formed by the protrusion of some one of the abdominal viscera into a kind of sac, composed of a portion of the peritoneum, which is pushed before them. The parts of the abdomen where these accidents most frequently take place are the navel, the groin, and the top of the thigh.

The *causes* of rupture are lifting heavy weights, with a sudden action of the body; leaps, and falls, especially across pieces of timber, trees, or round substances, producing a sudden pressure on the abdomen, or much straining; or it may arise from kicks or blows.

The ruptures to which females are most frequently subject are those at the navel and the thigh, or as the latter is professionally termed, *femoral hernia;* the organ protruding from the abdomen at the top of the thigh, but only showing its external sign or tumour some two or three inches down the front and inner side of the limb. The navel or UMBILICAL HERNIA is in delicate women sometimes caused during labour, particularly in severe and protracted cases; it however more frequently occurs in old age, or after sixty, from falls and other causes. Sometimes, indeed, the accident is congenital, the child being born with a rupture of the navel, or it results, in infancy, from original neglect in tying the navel string. The porridge made of rye flour is regarded as a good diet for consumptive patients.

On the Continent the grain, when burnt, is used as a substitute for coffee. Rye, while in the ear, is very subject to disease, by which the grain becomes soft and black, a condition equivalent to mortification. This article, called ergot of rye, from its singular and specific action on the womb is used in the practice of midwifery: the corn itself, when eaten in that state, produces the most serious consequences in those who partake of it. See Ergot of Rye.

S

S is the nineteenth letter of the alphabet, and as an abbreviation stands for *socius*, a companion, and for *societatis*, of or belonging to a society; as R.S.S. (*regiæ societatis socius*), or a fellow, companion, or associate of the Royal Society. Again, S.S.S. (*stratum super stratum*), layer above layer. Among physicians the letter is used in several ways, as in directions with regard to making up prescriptions, where S.A. stands for *secundum artem* (according to art, in a proper manner); S.N. (*secundum naturæ*), according to nature. As a symbol of weight, S. stands for *semis*, or half, and as a numeral, S signifies the number 7.

SABADILLA. — A name given by botanists to the seed-capsules of the Veratrum, which see.

SABATIA ANGULARIS.—The name of an American bitter root, used as a febrifuge instead of cinchona, but much inferior in strength and efficacy to that article: a species of gentian, but not in use in this country.

SABINA. — The Latin name of the Savine Plant, which see.

SACCHARUM.—Sugar, which see.

SACER IGNIS. — A sacred or holy fire: a name formerly given to an erysipelatous inflammation of the skin, now known as St. Anthony's fire, the rose, or erysipelas. Because some of the saints, from their abstinence, penances, and exposures, were liable to this disease, from the impoverished state of their blood, their devotees attributed it to a direct visitation from heaven, and, regarding it as a sign of holy ardour, gave it *the name* of the Sacred Fire.

SACER MORBUS.—Epilepsy, or the falling sickness; a disease which the ancients considered to be a visitation sent specially from heaven.

SACER MUSCULUS.—A name given by the old anatomists to a muscle of the os sacrum, running under the *longissimus dorsi*.

SACK. — This beverage, which Shakspere has immortalized as the chief aliment of Falstaff, was a posset of sherry. That sack in the bard's time was a general name for the white wines brought from the Canaries (and commonly called *Clary*), Candia, Cyprus, Malaga, and all parts of Spain, there is no longer any doubt; and that what we now denominate sherry was then universally understood as sherris sack.

In those days, however, old people were not in the habit of drinking their wine cold, but took their cups warm, spiced, or what we should now call medicated. Sack so prepared was considered not only invigorating to the brain, but strengthening to the body, cleansing it of all crude and hurtful humours, and thereby adding to the length of life and the happiness of the imbiber of such cheering and grateful potations. That sherry was the article meant as sack by Falstaff is proved by his exclamation, "There is lime in this sack, villain!"—that substance being used to destroy the excess of acid (the malic acid) occasionally present in the best sherry, the more dangerous article of sugar of lead being now employed for the same purpose. The following receipt for the preparation of sack posset, left us by Sir Walter Raleigh, is, in all probability, the actual mixture to which Shakspere refers when he makes old Jack say,—

"Brew me a pottle of sack finely."

Boil a quart of cream with a *quantum sufficit* of sugar, mace, and nutmeg; take half a pint of sack, and the same quantity of ale, and boil them separately, adding sufficient sugar; these two boiling liquids are now to be mixed, and poured into a pewter basin heated as hot as possible, covering the whole with a metal plate, also made very hot; the sack is then allowed to stand by the fire till it begins to sing, and is properly mellowed. Another form of making sack posset was substituting a quart of milk for the cream, and adding ten eggs, and increasing the wine to one pint. The nutritious qualities and medicinal effects of either preparation must be sufficiently evident to every reader, and, taken at bedtime, would prove an excellent remedy in colds and influenzas.

SACRAL.—Belonging to the sacrum, or back part of the hips. The *sacral plexus, sacral artery, sacral muscles*, are so named from their situation on or about the—

SACRUM OS, OR SACRED BONE.—The broad triangular bone which forms the back of the pelvis, fitted in like a wedge between the *ossa innominata*, forming the base of the vertebral column, and terminating in the *os coccygis*. The bone is called sacred from being the part in animals usually offered up in sacrifices.

SAFFLOWER, OR BASTARD SAFFRON.—A plant, native of Egypt, sometimes used as a diaphoretic, but chiefly esteemed for the rich rose colour, or carmine, obtained by treating the decoction with a finely powdered French chalk.

SAFFRON (*Crocus sativa*).— This well-known substance consists of the pistils of the common crocus, carefully dried, so as to preserve their colour, and sold in bright yellow or golden-coloured threads under the name of "hay saffron." The inferior pistils are pressed into long oblong cakes, and vended under the name of "cake saffron."

Formerly saffron was much esteemed as a diaphoretic and as a cure in jaundice, but is now only used as a colouring ingredient in mixtures, or in the preparation of tinctures. The only preparations of this article retained in the Pharmacopœia are the syrup (*syrupus croci*), made by boiling an infusion of hay saffron with lump sugar till of a sufficient thickness; and a tincture (*tinctura croci*), chiefly used for the same purpose.

SAGAPENUM. — A gum-resin obtained from the plant known as the giant fennel, and in its medicinal properties is a stimulant, carminative, and antispasmodic, and possesses, but in a very much milder form, the virtues of galbanum and assafœtida; its dose, when employed, which is now but seldom, being from 5 to 10 grains.

SAGE. — This well-known culinary herb has long been renowned for its aromatic, carminative, and astringent properties, and has been much employed as a detergent to ill-conditioned sores and ulcers, particularly of the mouth. It is, however, as a gargle, either alone or with vinegar, alum, catechu, or honey, that the infusion of sage is of the greatest value; or as a wash in aphthous eruptions of the mouth that it will be found of particular efficacy. Sage tea, as the infusion is called, may be made of any strength, according to the nature of the affection for which it is employed. The essential oil obtained from the fresh plant has long been esteemed as an excellent embrocation, with sweet oil and turpentine, in chronic rheumatism of the joints.

SAGITTALIS SUTURA.—A sagittal seam or suture. The name given by anatomists to one of the connecting seams of the bones of the head, one bone being dovetailed into another by innumerable projecting points or teeth, like the serrations of a saw, enabling the bones to lock into each other in a close but yielding bond. The sagittal or *arrow-shaped suture* runs along the top of the skull, and locks together the two side or parietal bones. See SUTURE.

SAGO.—This familiar farinaceous food consists almost entirely of starch, and is the inner pith of a species of palm, the *Sagus lævis*, or sago palm, a native of the East Indies, particularly of the Moluccas, where it grows indigenous in perfect forests, the trees averaging from thirty to forty feet in height, with a girth of nearly eighteen feet for the whole length of the trunk. The mode of preparation is to saw the stem into convenient sized billets, scoop out the pith, mix it with water into a paste, and then force it through a coarse sieve, by which it obtains its granulated appearance; the fecula, as it is then called, is dried in a furnace, and packed for exportation. The Chinese still further purify this granulation, and give it the round, beady form we are in the habit of seeing, and finally impart to it that pearly dressing so much esteemed.

As an article of diet for the invalid we have frequently spoken favourably of sago, particularly as a thickening for beef tea, mutton broth, and other invalid preparations.

SAINT ANTHONY'S FIRE, OR ERYSIPELAS.—This eruptive inflammation of the skin has already, under its most general name, Erysipelas, been fully considered, and to that heading the reader is referred.

The other most frequent names of erysipelas are *Sacer Ignis* and the Rose, which also see.

SAINT JOHN'S WORT.—An herb, formerly very popular for its supposed marvellous properties in curing all wounds of a martial kind, for which purpose it was used as an ointment to the part, and a decoction of the seeds or leaves made into wine given internally. At the present time, however, it is almost unknown in practice.

SAINT VITUS'S DANCE (*Chorea Sancti Viti*).—This is one of the purely nervous diseases, of which epilepsy may be taken as the type. Chorea, like epilepsy, depends upon great irritability of the nervous system, and generally occurs between the tenth and fifteenth year of age, and, although sometimes enduring for life, usually ceases about the age of puberty.

Though occurring in the weak of both sexes, females are most frequently subject to its attacks. The causes of chorea are very often imperfect dentition, or worms, sudden fright, objects of horror, or whatsoever violently affects the mind of a person of delicate constitution; and sometimes it arises from injuries directly affecting the cerebellum, or spinal column.

SYMPTOMS.—These come on with muscular tremors of the leg and arm of one side, the lower extremity first being attacked with a general weakness, which causes the leg in time to drag,—the foot, while the rest of the body is at rest, being convulsed by nervous plunges and twitchings. These symptoms become in time more marked and violent, the dragging of the limb becomes more complete, the difficulty to move it greater, and when it is raised from the ground in progression, the muscular actions throw it into the most ludicrous agitations. The same grotesque motions take place in the arm affected, over which the patient seems to have no control. If he lifts a cup or vessel of drink to his mouth, unless he seizes his affected hand with the sound one, and so compels it to perform the intended duty, the contents of the vessel will either be flung over his own head or into the face of the bystander. As the disease advances, the muscles of the face, particularly of the mouth, are also involved, and in severe cases even during sleep are convulsed.

TREATMENT.—The first object is to discover the exciting cause, and by proper remedies remove it. This done, the exertions of the physician must be directed to restoring the strength of the patient, and giving tone to the nervous system. The bowels must be constantly kept in order, either by occasional doses of castor oil, or compound rhubarb pill, if the patient is old enough to swallow pills, or by doses of lenitive electuary, and for children up to twelve or fourteen years of age such powders as the following.

Take of—

Powdered rhubarb . .	48 grains.
Scammony	36 grains.
Calomel	24 grains.
Jalap	48 grains.
Cream of tartar . . .	50 grains.

Mix thoroughly, and divide into twelve powders for a child from eight to ten years, one to be given in treacle or honey every morning, intermitting occasionally if they act too strongly; and divide into eight powders for a child from ten to twelve years, to be given in the same manner and time.

The strength is to be restored by the mineral tonics, such as zinc, copper, and silver, as shown in the following prescriptions. At the same time cod liver oil and carbonate of iron should be alternated with the pills prescribed below. The shower bath should be employed daily, and friction along the spine with a rough towel adopted after each bath. Cold sea bathing, change of air, and exercise, form most important additions to the treatment.

Electricity is an agent of such value in all diseases of this sort, that as soon as the exciting cause has been removed, either galvanism or electricity in shocks should be administered daily, or one of Pulvermacher's galvanic chains worn on the affected limbs. In severe cases the system may be roused by antispasmodics, and occasional injections of gruel and turpentine, and in extreme cases a blister on the spine, with strychnine. Finally, the diet must be rich and invigorating.

No. 1. *Tonic Pills.*—Take of—

Nitrate of silver, reduced to powder . .	4 grains.
Rhubarb powder . .	20 grains.
Ginger powder . . .	20 grains.

Mix thoroughly, and make into a mass with extract of gentian, and divide into twenty-four pills: one to be taken three times a day.

No. 2. Take of—

Sulphate of copper, finely powdered . .	4 grains.
Calumba powder . .	20 grains.
Ginger powder . . .	20 grains.

Mix thoroughly, and make into a mass with extract of gentian. Divide into twenty-four pills: one to be taken three times a day.

No. 3. Take of—

Sulphate of zinc, or purified sulphate of iron, reduced to powder	12 grains.
Ginger	20 grains.
Rhubarb	20 grains.

Mix, and make into a mass with extract of gentian, and divide into twenty-four pills: to be taken as above.

SAL.—The Latin name for Salt, which see.

SAL ABSINTHII.— Salt of wormwood; the carbonate of soda.

SAL AMMONIAC.—The muriate of ammonia. A salt found native in the sulphur pits of Pozzuolo, in Italy, and other parts of Europe and Asia, and extensively manufactured from the manure of camels, and in Europe from soot, bones, oil, and salt, and chemically consisting of ammonia and muriatic acid. Sal ammoniac derives its name from being originally found in great abundance in the Egyptian sands near the once celebrated temple of Jupiter Ammon.

Though of immense use in the arts, particularly to the dyer, to give brilliancy to his colours, and the worker in metal, it being especially valuable in soldering, it is only employed in medicine as an external application for cooling lotions.

SALEP.—The fecula of a plant brought from the East, and used extensively as an article of farinaceous food, answering most effectually all the purposes of tapioca, sago, arrowroot, &c. In this country a salep of equal quality is obtained from the roots of the common orchis, prepared in a peculiar manner, dried in an oven, and then reduced to powder.

SALICINE.—An alkaloid active principle obtained from the willow tree,—the *salix*, as the plant is botanically called,—and which at one time was thought to possess all the properties of quinine. Its strength, however, is much below that of quinine, and its effect by no means to be relied on. The dose, when given as a febrifuge, is from 10 to 30 grains; as a tonic, from 2 to 3.

SALINE DRAUGHTS. — Cooling drinks, either made with soda, potass, or ammonia, and acidified with tartaric or citric acid. In cases of fever, sickness, or nausea, the benefit afforded by a saline draught is often of the most decided character, not only in abating the heat and fever, but in correcting the irritable condition of the stomach, especially in biliary attacks. When the carbonate of soda is employed, 20 grains of soda dissolved in 8 ounces of water will require 15 grains of tartaric acid. If carbonate of potass is preferred, 15 grains of potass to 20 grains of tartaric acid are the proportions necessary to secure a grateful beverage. When carbonate of ammonia is employed, 20 grains of the ammonia will demand the same amount of citric acid to neutralize the 8 ounces of water, or 15 grains of tartaric acid.

In all cases the alkali should be dissolved first, and the acid then added, the draught being taken while effervescence is going on; or the acid may be dissolved in one half of the water, and the alkali in the other, and both solutions mixed and drunk during their effervescence. A teaspoonful of syrup of lemon, orange peel, or capillaire, in the first instance mixed with the water, will greatly add to the enjoyment of the draught, while in sickness the same amount of brandy will be found to allay the irritation much more effectually.

SALIVA.—One of the most important secretions of the body, and not only a necessary agent in the proper articulation of our words, but of the utmost importance as a solvent for our food. Saliva is a thin, watery secretion of the salivary organs, and consists of water, common salt, and the muriate of potass.

SALIVARY CALCULUS.—The large quantity of earthy matter contained in the saliva is in time deposited on the teeth, producing the crust known as tartar. This, if neglected, gradually collects round the ducts of the salivary glands, between the teeth and on the gums, preventing the effusion of saliva into the mouth, causing absorption of the alveolar processes of the jaw, decay of the teeth, an ulcerated state of the gums, and making the person's breath intolerably offensive: besides this, the mouth is rendered unsightly to a degree. The treatment of such a state of things is very simple, and consists in scaling the teeth, cleaning the mouth, teeth, and gums with a brush and powder, or a wash of chloride of lime, and giving one or two doses of aperient medicine.

SALIVARY GLANDS.—The system of organs which supply the saliva, so necessary in the functions of mastication and digestion, are situated in the mouth, and consist of the *parotid glands* (one placed in either cheek, between the ear and the angle of the lower jaw), the *sub-maxillary glands*, one under each side of the jaw, and the two *sub-lingual glands*, under the tongue; in all six, three on each side of the mouth. Besides acting as a mere solvent to the food swallowed, saliva exercises a chemical action, and begins one of the most necessary changes in the process of digestion—the conversion of the starch taken at each meal into sugar. The amount of saliva secreted daily by a healthy man is estimated at between 16 and 20 ounces. As every ounce of this valuable fluid is of the utmost service to the animal economy, and as nature never supplies more than is required, it will be evident how injurious must be the habit of chewing and spitting; and no man who has a true regard for his health will ever think of smoking if it necessitates a frequent expectoration, as such a practice must, sooner or later, lead to indigestion, hollow cheeks, and emaciation.

SALIVATION, OR PTYALISM.—This disease of the salivary organs, resulting in an inordinate flow of saliva, may either proceed from the masticating of some stimulating root or bark, or it may arise from the absorption of some mineral or vegetable substance, acting on the whole animal economy, and causing a softening and enlargement of the gums, a loosening of the teeth, an excessive flow of saliva, and a most offensive state of the breath. Mezereon, pelletory root, sorrel, tobacco, and many other plants will produce a temporary salivation, which, however, subsides as soon as the cause is removed.

The chief article which induces constitutional salivation is mercury in all its forms; next, copper, antimony, zinc, opium, and some other vegetables. The best treatment in salivation is to act freely on the bowels by saline aperients; give a light, soft diet; order exposure in a cool atmosphere and a well-ventilated room, and the washing of the mouth frequently with borax and water, or a weak solution of chloride of lime.

SALIX.—The bark of several varieties of the willow, used as a tonic when reduced to powder, in doses of from half a drachm to a drachm. An infusion of the willow bark is also given for the same object.

SALMON.—This well-known fish is one of the red-fleshed fresh-water fishes, and consequently contains more oil than the white or salt-water fish: on this account salmon, though one of the most *prized* and delicious of our fish, is as an aliment most objectionable for invalids, or persons of weak digestion, more particularly so if partaken of with the usual sauces, and is especially objectionable with cucumbers; indeed, it should never be partaken of by any individual affected with weak digestion. Even in its dried state, when cooked for breakfast, it should be shunned as a treacherous friend.

To the man of healthy body and strength of stomach, however, salmon in its fresh state is an article of diet that is not only rich and stimulating, but highly nutritious. There is one preparation of salmon, however, which persons with even the strongest digestions and in the best of health should avoid as an actual danger, namely, pickled salmon; and as that article is most prevalent in the autumn, when the system, by the use of fruits, the change of season, and the state of the atmosphere, is most susceptible of diarrhœa, from its proneness to produce relaxation, which may eventuate in cholera, it ought to be strictly avoided.

SALT.—There is probably no subject in the whole range of this work, or connected with the physiology of animal and vegetable life, of more importance than the commonplace domestic article of salt (the *muriate of soda*, or by modern chemists named the *chloride of sodium*). We have already in a degree shown, under the articles FOOD and DIGESTION, what an important agent it is in that last function alone; how necessary to the true vitality of the blood; and how largely it enters into some of the secretions. Salt is so necessary to the well-being of animal life, that no creature can exist long without it, and man least of all. The carnivora, when they dart on their prey, first render the victim powerless by a blow on the head, then, fixing their fangs in the animal's throat, voraciously imbibe the warm blood of their prey, and not till they have sated their thirst with this *saline* stream do they attempt to appease their appetite with the flesh of the animal they have killed. The carnivora, therefore, obtain the salt necessary to their lives from the blood and flesh of their prey.

The ruminating animals, however, who equally require this necessary article, obtain it from the natural springs of the earth, and lick the soil on which the crystals have been evaporated. These frequented places, called by the Americans salt-licks, to which the deer and other animals resort, are often made traps to catch the unsuspecting deer; their natural enemies, knowing their partiality for the salt, lying in wait for their coming, and from behind some bush or tree springing on the unsuspecting animal while licking up the salt. We have shown, under Food, that there are three sets of materials on which the human body must be supported to insure health and continuance of life, — heat-forming, flesh-forming, and mineral foods. If we feed a dog or man on the first or second exclusively—the heat-forming, of which butter is the type, and the flesh-forming, of which caseine or cheese is the symbol,—either the man or the animal will assuredly die, —those two orders alone, however rich and nutritious, being unable to support the wear and tear and the exigencies of life; but if to a due mixture of both we add a just proportion of mineral or earthy salts, we impart to the system all it requires, and insure a perfect digestion, with health and strength.

Of all these earthy particles common salt is one of the most important. These salts either being extracted from the food taken into the stomach, or absorbed into the system from the rinds or pith of raw fruit, from crude vegetables, such as salads, cucumbers, onions, watercresses, &c., and also in part acquired from the water we drink. It is the absence of these mineral salts from the body which produces that condition of the system which results in rickets, or *mollities ossium*, and the excess of them, particularly of the muriate of soda, which induces that putrescent condition of the body known as scurvy. Of all the salts which enter into the body of man, the *chloride of sodium*, or common salt, is the only article which the system acquires directly from the mineral kingdom or from nature; all the others we obtain from plants or animals,—in other words, from our animal and vegetable foods. Salt determines the life and form of all that exists in the ocean; for if we could withdraw the chloride of sodium from the sea, all its inhabitants would directly change their nature, and become like roach, bream, carp, and pike, or fresh-water fish, while the seaweed and marine plants would be changed into grass, rushes, and the vegetation only proper to ponds and rivers.

This fact will convey a more perfect idea of the necessity and importance of salt in the economy of human life than any other example we could advance. Next to the phosphate and carbonate of lime, salt is the most largely found mineral constituent of the human body, 3 drachms being the proportion in each gallon—old measure—of the blood. We need not here enter upon the physiological or chemical effects of salt on the system; it will be sufficient to say that it acts as a tonic to the stomach, promotes digestion, and is necessary to the healthy performance of many of our functions.

Salt is one of the most widely spread and plentiful minerals which the earth gives for the use of man. All the water of the ocean derives its saline taste from salt: many springs are completely saturated with it, and are hence called "brine springs;" and it also exists crystallized in beds within the earth, of immense thickness, and extending for miles each way.

The salt mines of Cheshire are the finest and most extensive in England, and in some places the stratum or layer of salt is more than a hundred feet thick, perfectly white, and crystallized. Salt is not a simple body, but is composed of two simple bodies or elements—chlorine and sodium; hence it is called by chemists the chloride of sodium. It can be formed by putting carbonate of soda into hydrochloric acid (sometimes called muriatic acid) until no more effervescence takes place; the result will taste salt, and yield pure salt on evaporation.

The waters of the sea are in some places evaporated by the heat of the sun in shallow hollows dug out of the beach: the product is called "bay salt," and is very impure. But the chief part of the salt of commerce is procured by evaporating the water of brine springs; this water is pumped up into large iron cisterns, placed beneath slight sheds, to keep off the rain, and having flues running beneath them. The first impurities are thrown away, and as evaporation goes on the salt crystallizes, and falls to the bottom of the cistern in a fine white powder; this is taken out with wooden shovels, and placed in conical vessels, with a hole beneath to drain off the moisture; it is then dried by means of stoves, and is fit for use. When no more salt falls down, the impure liquor, called "bittern," is drawn off, and used to procure Epsom salts, by mixing it with sulphuric acid. The bittern contains chloride of magnesium, and this the sulphuric acid changes into sulphate of magnesia, which, purified, forms Epsom salts.

About half a million tons of salt are made in England every year. Salt, besides its general use as a condiment, and in preserving food for storing ships, &c., is also used for several manufacturing purposes. By adding sulphuric acid, and heating it, the acid called "hydrochloric" is given off, which is largely used for many purposes; but the chief use made of salt by manufacturing chemists is to prepare soda for cleansing and soap-making.

Medicinally considered, salt acts on the human body as a tonic and condiment, an emetic, a purgative, and as a disinfectant. For the first purposes we take it with most of our meals; as an emetic, a teaspoonful dissolved in half a pint of warm water will produce vomiting when no other remedy of the kind is at hand, while twice that amount will be found to act on the bowels as a purgative. An injection of warm water and salt is sometimes used to expel the round worms (*lumbrici*) from the colon and large intestines.

Sulphuric acid poured on salt, by liberating the chlorine gas, is sometimes used as a disinfectant where no other agent can be procured, to destroy the fœtid odour of an apartment. As an antiseptic, to preserve fresh provisions, salt is of the utmost importance; though in preserving the animal fibre from decay it is always at the sacrifice of much of the animal juices, and the nutritious virtue of the meat so preserved.

SALT BEEF, OR SALTED PROVISIONS, however carefully boiled, are not capable of supplying all that is required for recruiting the system. Salt beef or salt pork, if constituting the principal food of man for any length of time, induces scurvy in its most violent form.

This does not arise from anything abstracted from the flesh during the process of boiling, but from the loss which had previously taken place in consequence of the salting process. When a piece of meat is covered with salt, or immersed in brine, the salt penetrates the whole fibre of the flesh, and the juices contained within are drawn out, and mix with the brine; the salts of potass contained in it are exchanged and superseded by those of soda, derived from *the salt* with which it has been cured. Now, as a constant supply of potass is required in the system to renew the *muscular fibre*, it is quite clear that the want of it must be attended by some derangement of the health, and hence the benefit derived from taking vegetables, which, by supplying potass, make up for the want of this alkali in the meat: it is this on shipboard that causes those who live on salt meat to be affected with scurvy.

SALTPETRE (Nitre, or the Nitrate of Potass).—This extremely useful salt is largely used in practice as a cooling diaphoretic and diuretic medicine, in cases of fevers and affections of the bladder or kidneys, and is also prescribed in diluents and beverages where much thirst and heat are present. It is also of great benefit as an expectorant in combination with camphor water and tartrate of antimony. The dose of powdered nitre for an adult is from 5 to 10 grains, and for a child from two to four years from 3 to 5 grains. If taken in excess, saltpetre acts as an irritant poison, and must be treated accordingly. See Nitre, and Poisons.

SALTS.—Though by this term the common purgative article, sulphate of magnesia, or Epsom salts, is generally understood, chemists are in the habit of defining a salt to be a compound of an acid and an alkali, or some salifiable base. Any substance in a state of crystallization is denominated a salt.

SALUTARY DETERSIVE DROPS.—A secret medicine, used for syphilis, and said to owe its efficacy to corrosive sublimate.

SALVATELLA.—A large vein in the foot, from which the surgeons of the last century were in the habit of bleeding their patients, before that practice fell into disuse.

SALVE.—A name given to any cerate, ointment, or unctuous compound.

SAL VOLATILE, OR VOLATILE SALTS.—The carbonate of ammonia; commonly called stone hartshorn, or Baker's salts. See Ammonia, and Hartshorn.

SAL VOLATILE, SPIRITS OF.—This well-known and useful medicine, professionally called the aromatic spirits of ammonia (*spiritus ammoniæ aromaticus*), is used both as a stimulant and antispasmodic, and is given with great benefit in cases of hysteria, fainting, sickness, exhaustion, or any case of nervous excitement or depression.

Spirit of sal volatile is usually prescribed in combination with spirits of lavender, camphor julep, and sometimes ether,

ing to the intention for which it is
The spirit of sal volatile is pre-
by distilling the essential oils of
g and lemon, rectified spirits, and
of ammonia, from a glass retort.
ose of this spirit is from 20 to 60
in water, either alone or with the
s already named.

MBUCUS EBULUS. — The bo-
l name of the dwarf elder, as the
cus *nigra* is of the black or common
ree. See Elder.

MPHIRE.—An umbelliferous plant,
ng in considerable abundance on the
r. cliffs along the south coast of
nd, and which, from its warm,
tic, and stimulating qualities, is
as a pickle and condiment, — for
purpose, indeed, it is admirably
d.

NDAL or RED SANDERS
D (botanically known as the
carpus santolinus).—There are two
es of this plant, the red and the
The plant is only used as a dye-
r to colour tooth-powders.

NDRAC. — A gum-resin, formerly
among medical men as an astrin-
but now only employed in the arts,
the manufacture of varnish.

NGUIFICATION.—Blood-
g; another term for chylification,
t function of the body by which the
is converted into blood.

NGUINEOUS APOPLEXY. —
exy. A term sometimes used as a
tion from the apoplexy of old age,
us apoplexy. See Apoplexy.

NGUIS.—Blood.

NIES. — Gore; a thin, fœtid dis-
, in which an unhealthy pus is
with blood and lymph.

NTOMINE.—The active principle
mseed.

NTONICA ARTEMISIA. — The
ical name of wormseed, a useful
ine, when reduced to powder, for the
f worms in children. See Worm-

PHENA.—The large vein of the leg,
tinuation of the crural or femoral
which finally expends itself in the
so called from being easily visible
the skin.

PO, SOAP. — *Sapo Hispaniola*,
sh or Castile soap. See Soap.

PONARIA, or the common English
known as Soap-wort. A vegetable
, when boiled, gives out so much
ge and potass, that it can be easily
into a lather. As a diuretic, in
affections of the kidneys, it was formerly given in decoction, and with good effect, though now neglected.

SAPONARIA VACCARIA. — Cow Basil.

SARCOCELE. — A fleshy, scirrhous tumour of the testicle.

SARCOMA.—A fleshy tumour and excrescence. Such tumours may occur on any part of the body.

SARDONIC LAUGH.—A convulsive action of the muscles of the face, and a forced, unnatural laugh: an effect, the result of some nervous derangement. See Risus Sardonicus.

SARSAPARILLA.—This esteemed and valuable article of medicine is the long, fibrous root of a rough bindweed plant, growing in the greatest abundance in low, moist ground near the banks of rivers; and though indigenous to the south of the American continent, is produced in more perfect condition in Jamaica than in any other locality, either of South or Central America.

SARSAPARILLA.

The botanical name of sarsaparilla is *Similax*, and though there are several varieties of the plant, that most esteemed for its medicinal virtues is the *Similax syphilitica*.

Medical Properties and Preparations. — Sarsaparilla, called by the Spaniards *sarze*, and officinally *sarsa*, acts on the system as a tonic, corrective, alterative, and diaphoretic, according to the mode in which it is given; but is most beneficial in what is called secondary syphilis, in all obstinate cutaneous diseases, and as a tonic to the convalescent from rheumatism, fever, or any prostrating disease. The preparations kept in the shops are,—the split root; the powder of the dried root, the adult dose of which is from 1 scruple to 1½ drachm twice a day, and from 10 to 20 grains for children. The simple decoction, made by boiling 2½ ounces of the root in 1½ pint of water till it becomes a pint; the dose of which is half a tumblerful three times a day. The compound decoction, called the Lisbon Diet Drink, made by boiling 2½ ounces of sarsaparilla, 2 drachms of sassafras, 2 drachms of guaiacum shavings, 2 or 3 drachms of liquorice root, and 1 drachm of mezereon bark in 1½ pints of water, till it is reduced to 1 pint; the full adult dose of which is from a wineglassful to half a tumblerful twice or thrice a day. The last preparation is the liquid extract, which, being made with spirit, will keep for a length of time without injury to its virtues. The dose of this preparation is from 1 to 4 drachms twice a day. This is a very useful form of the drug for children to take, the dose from two to six years of age being from half a drachm to 1 drachm, night and morning. The active principle of sarsaparilla resides in a crystalline substance, called either *sarsaparillin* or *similicine*.

SARTORIUS.—The name given by anatomists to a muscle on the inside of each thigh, whose function is to cross one leg over the other, or adduct each limb. As this is the muscle used by tailors in sitting cross-legged, anatomists have named it, from *sartor*, a tailor, *sartorius*.

SASSAFRAS, OR SAXAFRAS (the *Sassafras officinale* of the Pharmacopœia).—The tree which supplies the aromatic chips which, under the name of sassafras, are used to give flavour to decoctions or infusions, is a native of South and Central America. Though supposed to possess diaphoretic and stomachic properties, few medical men place any reliance on such virtues, and chiefly use it to give an aromatic flavour to their bitter mixtures. It only enters into the formula of the compound decoction of sarsaparilla. An essential oil, obtained by distillation from the chips, is sometimes employed in expectorant emulsions, in the proportion of *6 or 10 drops* to an 8-ounce mixture.

SASSAGNA.—A kind of macaroni, made with the best wheaten flour and the white of eggs, and used in soups and boiled milk, as a light and nourishing food for invalids, especially for supper.

It is usually sold in thin, broad ribbons, by which it may always be distinguished from macaroni or vermicelli.

SASSOLINE.—A crystallized boracic acid, found on the margin of the hot springs of Sasso, in Italy.

SATELLITE VEINS.—Another name for the *venæ comites*, or attendant veins on the bronchial artery.

SATURATION.—A chemical term, signifying a fluid which has absorbed as much of an article as it can hold in solution. If a quantity of salt be gradually added to a glass of water, and the liquid stirred after each addition till the fresh supply is dissolved, the water will eventually become so loaded or charged with salt, that all fresh additions, instead of being taken up by the water, will fall to the bottom of the vessel just as they were put in. When the fluid has reached the point at which it can dissolve or hold no more, it is said to be *saturated*.

SATURNUS.—The name given by the old chemists to lead; hence the still popular name of *saccharum saturni*, or sugar of lead.

SATYRIASIS.—A species of menomania, attacking both sexes, but more frequently the male; the masculine form of nymphomania. Cullen, and other nosologists, have ranked this disease as a madness, and according as the insatiable passion shows itself in man, it has been termed *satyriasis furens*, and *nymphomania furibunda* when affecting the other sex.

SAUER KRAUT. See SOUR KROUT.

SAUSAGES.—This popular form of food, when home-made, and prepared with fresh beef or pork, and bread, is as good and savoury a food as can be partaken of by persons of healthy digestion; but either fresh or smoked, is decidedly objectionable for the invalid, or one suffering from a weak and irritable stomach.

German sausages, from being made from the viscera of animals, mixed with blood, garlic, spice, meal, fat, and other articles, and then highly dried, are articles which should be eaten with great reserve and caution. Even when the ingredients are fresh in the first instance, they are, from the nature of their substances, the mode of preparation, and the time they are often kept before consumption, parti-

liable to pass into fermentation
ecome putrescent, in which state
artaken of they act on the system
irritant poison, and often produce
erious consequences. The black
gs made in this country, on ac-
of the blood they contain, are also
when long kept, to become rancid
isonous.

VINE.—The *Juniperus sabina.*
vine is a common shrub, a native
country, and cultivated in most of
ttage gardens. Though at one time
g a high place in the Pharmacopœia
ant of great medicinal virtue, it is
ut seldom used in practice, at least
nternal remedy. Savine acts on the
as a stimulant, cathartic, and an
ely powerful emmenagogue, pro-
an almost immediate influence on
mb, and is the nearest drug, in its
ive action on that organ, to *secale*
we possess. On this account it has
oo frequently employed by the un-
lous as a means of producing mis-
ge or abortion. The fresh and the
ops of the plant are kept for the
es of infusion; an oil is also
ed from the plant, which, dropped
ar and rubbed down with gum into
ulsion, is sometimes given as an
agogue; and a tincture, for the
purpose, now finds a place in the
harmacopœia.

most generally used preparation of
is the ointment made of the juice
aves, employed as a stimulant to
nt ulcers, and as an issue ointment,
p open a blister, the raw surface
dressed with the savine ointment for
ny days as are necessary to establish
discharge.

XIFRAGE.—A genus of medicinal
. See SASSAFRAS.

BIES.—The itch, from *scabo*, to
h; a scabby eruption on the skin.
are four varieties of this disease,—
bies papuliformis, an inflamed pa-
eruption, discharging a thick yellow
scabies lymphatica, an intensely
g eruption of transparent pustules,
ring on the wrists, back of the
, between the fingers, feet, ankles,
es, and also in the groin, armpits,
ends of the elbows and thighs;
s purulenta,—this form appears
vated yellow pustules, inflamed
their bases, and which eventually
and ulcerate; and lastly, *scabies*
tica, which combines all the features
the other varieties, and generally affects the entire body. As the name implies, this is a form of the disease that depends on great bodily prostration and constitutional impurity. For the treatment of Itch, see SKIN, DISEASES OF.

SCALD (SCALLED) HEAD.—An eruptive disease of the scalp; a scaly or scabbed head. In this disease the head is completely covered with scabs and sores, which usually break out in scrofulous children when the child is teething.

The SYMPTOMS of this disgusting disease commence with large soft patches, slightly flattened, with irregular margins, and slightly inflamed bases. Patches of the pustules, which are numerous, unite and form crusts or scabs, which in time constitute a dense continuous covering over the entire head. A profuse acrid discharge soon after follows, most offensive to the nostrils, in which vermin are quickly generated; the hair is matted together with scabs, and the whole head filthy in the extreme.

The TREATMENT consists in first shaving the head, and washing the scalp with soap and water, applying every night a little of either of the two following ointments, washing the head in the morning clean from all grease, lightly dusting the scalp with violet powder, and giving one of the powders prescribed below every morning.

No. 1. *Ointments.*—Take of—

Spermaceti cerate . .	1 ounce.
Creosote	40 drops.

Mix.—No. 2. Take of—

Citron ointment . .	1 drachm.
Spermaceti cerate . .	7 drachms.

Mix with a bone spatula.

Powders.—Take of—

Powdered rhubarb . .	24 grains.
Grey powder . . .	15 grains.
Precipitated sulphate of antimony . . .	12 grains.

Mix: divide into twelve powders for a child from one to two years old; into nine powders for a child from two to three years; into six for a child from three to six years of age. One powder to be given every morning in each instance. From 10 to 20 grains of powdered sarsaparilla may also be given twice a day.

SCALDS.—The consequences resulting from accidents with boiling water are so exactly similar to those produced by fire, that it is quite unnecessary to repeat what we have already said under Burns, the treatment being precisely analogous. When the scalding has raised a blister, care must be taken not to break it; but, as in burns, wrap the part instantly in cotton wool or wadding, in fact anything that will exclude the air as quickly as possible from the injury. We beg in this place to impress on the memory of the reader, that any burn or scald instantly enveloped in wool or wadding may be safely and confidently left so, no other application being necessary, if the exclusion of the air has been quick and effectual. A burn or scald, once wrapped up, should not be undone or examined till it is time to remove the covering altogether.

The drinking of boiling water from tea-kettles or teapots, by children, is one of the most serious of all accidents of this nature; severe inflammation of the mouth, throat, and gullet instantly follows, which often produces effusion or congestion of the lungs, or a form of croup that rapidly proves fatal. All that can be done in such a case is to draw the excess of blood from the seat of the injury by hot water to the feet, cold lotions applied to the throat, and by giving an emulsion of oil, gum, and honey, with laudanum, if the child is old enough to be so treated. See BURNS.

SCALENUM.—A triangle, from which we derive—

SCALENI.—The name of three triangular-shaped muscles of the thorax, which rise from the ribs and are inserted in the skull and transverse processes of the cervical vertebræ. Their office is to assist in bending the head and neck, as in bowing.

SCALP.—The thick, loose cuticle that covers the cranium or skull, and connected with the *peri*-cranium by loose cellular tissue. The scalp is liable to many diseases, and several accidents; among the formêr are those eruptive affections which it shares in common with the skin of the rest of the body, such as dandriff, impetigo, scalled head, ringworm, &c. It is also liable to tumours of many kinds, particularly encysted tumours, which are very common to the scalp, and require an operation to remove them entirely, cyst and all: this is effected by making an incision through the integuments, grasping the sac of the tumour with a pair of forceps, and dragging the cyst out. Sometimes there are as many as five or six of such tumours existing at one time on the head; in which case only one, or at most two of them, should be operated on at one time, in case of erysipelas supervening.

Contusions, bruises, lacerations, and incisions are among the most common accidents to which the scalp is liable; any one of which may be followed by inflammation, suppuration, and sometimes by sloughing of the part, not unfrequently extending the inflammatory action to the brain beneath.

We have already described how accidents of the above description are to be treated, we have only here to observe that the same treatment, in general, is to be adopted with the scalp as with other parts of the body. The part is first to be washed with warm water, the hair cut closely off all round the injury, all dirt carefully removed, the torn, crumpled, or cut edges pressed by the sponge or fingers, flat, and into their natural situations, the whole gently dried, and the lips of the wound kept together by a few strips of adhesive plaster, a fold or two of lint laid above, and a bandage, if necessary, or a handkerchief, applied to keep all in order. When the cut or laceration is long, it is sometimes necessary to use the needle, and join the edges by one or two stitches; but great judgment is necessary in putting stitches in the scalp, on account of the danger of erysipelas.

When the injury is a bruise or contusion, warm fomentations, applied on piline, are to be continued for several hours, till all tenderness and pain have subsided. In all cases, the patient must be kept perfectly quiet and still, a low diet given, and an aperient pill, with saline draughts, repeated at intervals of four or six hours for several times. When accidents to the scalp occur to persons of a full or gross habit of body, it is often necessary to take some blood from the arm as a precautionary measure, or lower the system by tartar emetic and Epsom salts. Inflammation of the brain, and erysipelas of the scalp, are in all cases the two great dangers to be dreaded.

As a wash for the scalp in many of the eruptive diseases of children, a strong solution of borax and water, or the subcarbonate of potass (salts of tartar), in the proportion of 1 drachm of the alkali to 4 ounces of water, will be found very often, with a little cooling medicine, to effect a complete cure.

SCALPEL.—A surgical instrument; a long-bladed knife, with fixed handle, used both in operating and in dissection.

SCALY DISEASES.—An order of cutaneous affections in Willans' arrangement.

SCAMMONY.—A gum-resin, the product of the *Convolvulus scammonium*, a shrubby plant, a native of Syria and

cammony is one of the best of
is purgatives, being less drastic
ting than aloes, and more
e than colocynth or jalap.
is a simple purgative, and
sively on the small intestines,
ding to the amount of it em-
either a laxative, purgative, or
, and on this account it enters
of the preparations of the
œia, and is a great favourite
medical men for children.
kept in the form of the gum-
in the condition of powder that
generally used; the adult dose
n 5 to 12 grains, while for
ccording to the age, from one to
, the dose is 1 or 3 grains. The
acopœia orders a confection of
, made of ginger, oil of cara-
cloves, scammony, honey, and
which the dose for a child of two
ge would be 5 grains. The
scammony powder, composed
d scammony, jalap, and ginger,
seful form of giving this drug.

SCAMMONY.

rient powder for children, the
formulary will insure a mild
al action on the bowels.

—

red scammony .	3 grains.
red jalap . . .	6 grains.
red ginger . .	2 grains.
owder	3 grains.

Mix: make a powder for a child of eight years.

SCAPHOID, OR BOAT-SHAPED.—A name given to some small bones and cavities of bones, from their fancied resemblance to a little boat. Sometimes called Navicular.

SCAPULA.—The bladebone. A flat, triangular bone, with a long crest or ridge running along its whole outer surface. One extremity of this bone, scooped into a hollow, and called the Glenoid cavity, serves to articulate the head of the bone of the arm, while the extreme point of the spinous ridge overlaps the joint to form the top of the shoulder.

SCAPULARY.—The name of a bandage for the shoulders, used in cases of fracture of the scapula.

SCARF SKIN.—The epidermis; the delicate, transparent, and insensible texture spread over the *cutis*, or true skin. See SKIN.

SCARIFICATION.—Cutting the skin, as in cupping, when the points of twelve or eighteen lancets are rapidly passed over the cuticle, inflicting as many superficial cuts or scratches, through which the blood starts on the application of the exhausted cupping-glasses. It is sometimes necessary to scarify the skin in cases of *anasarca*, or general dropsy to allow of the escape of the excess of water, which, if not provided with an exit, would often burst the cuticle. The cutting of infants' gums, to permit the coming through of the tooth, is also called scarification—a term, however, which is only applicable when the mere skin of the gum holds down the tooth; but when, as is sometimes the case, the firm texture of the gum itself has to be cut to allow of the escape of the imprisoned tooth, the term lancing is more applicable than that of scarification.

SCARLATINA.—The professional name of scarlet fever.

SCARLET FEVER.—This disease, formerly called *rosalia*, *rubeola rosalia*, *febris rubra*, and now *scarlatina*, though generally regarded as an affection of childhood, not unfrequently attacks persons in the prime of life, or at least of an adult age.

Next to measles, there is no disease of juvenile life for which the mother entertains a greater apprehension than that of scarlet fever, so tedious and disheartening are many of its *sequelæ*, or after consequences. Much of this fear, however, is quite unnecessary; for if proper care is taken of the patient, and the disease treated on rational principles, scarlatina is as manageable an affection as any the medical man is called on to prescribe for.

Physicians have divided scarlatina into several kinds or varieties. Without confusing our subject by many subdivisions, the following arrangement, we believe, will be found to embrace the most important phases of the disease: — 1st, *scarlatina simplex*, the mild or simple form of scarlet fever; 2nd, *scarlatina maligna*, the severe or malignant form of the disease.

1st. SCARLATINA SIMPLEX.—The *symptoms* of this condition of the disease commence with cold chills or rigors, nausea, thirst, hot skin, a quick pulse, accompanied with difficulty of swallowing and breathing; a coated tongue, showing through its white fur innumerable elevated specks—the erect papillæ of the tongue, —which, standing up in minute red points, give the centre of the tongue a speckled appearance. This is one of the most distinctive features of the disease. To these symptoms are added lassitude, weariness, pain in the head, constipated bowels, and scanty and high-coloured water. On the third day, a bright efflorescence, or rash of minute red points, makes its appearance, first on the neck and bosom, in a few hours extending to the body, back, and extremities, but appearing much thicker and deeper in colour on the arm, elbow, or side, or wherever the patient has, by laying or pressure, made it more vivid. At first the skin is smooth, the fingers being unable to detect any roughness on the surface where the rash appears. As the disease advances, however, a perceptible roughness can be felt, caused by the elevation of the inflamed cuticle. The appearance of the rash in scarlatina has been likened to the colour of the shell of the boiled lobster, a characteristic to which it bears a very close resemblance. About the fifth or sixth day the eruption begins to decline, becoming gradually fainter, till about the eighth it entirely disappears. The first and the last symptom in this disease is the *sore throat* and difficulty of swallowing, and this, with the thirst and heat, always becomes more severe as evening approaches.

The *treatment* of scarlet fever is, as we have already said, simple; but still it requires to be decisive, and must begin by putting the patient into a large, well-*ventilated room;* throwing from the bed all excess of clothes, such as blankets, and keeping both the apartment and the patient's body cool. When the heat of the skin is great, the rash comes out with difficulty, and the breathing is oppressed and heavy, the patient is to be stripped, and sponged all over the body *quickly* with cold vinegar and water, or with tepid water; or he may be placed in a tub, and a few basins of tepid water, or vinegar and water, poured over the breast and shoulders. Whichever plan has been adopted, and that plan performed quickly, a blanket is to be instantly wrapped round the body, and, so enveloped, the patient is to be put to bed, and left undisturbed for at least two hours. As soon as possible, a hot bran poultice should be passed completely round the throat, and repeated as often as it becomes cold, and so continued for the whole of the first six days. A low diet, with cooling acidulated drinks, must be enjoined, and, for an adult, a compound colocynth pill is to be taken once or twice during the height of the fever, followed by a Seidlitz powder, made with double the usual quantity of Rochelle salts in each. For children, a few aperient powders, such as those below, with every other day a small quantity of the infusion of senna, in which Rochelle salts has been dissolved, in the proportion of one drachm of salts to an ounce of the infusion, is all that in general is required.

Aperient Powders.—Take of—

Cream of tartar . . .	2 scruples.
Powdered jalap . . .	48 grains.
Powdered scammony .	36 grains.
Grey powder	24 grains.
Ginger powder . . .	12 grains.

Mix thoroughly, and divide into twelve powders for a child of six years, into nine powders for a child of eight or nine years, and into six powders for a child of twelve years of age; one powder being given every morning, or every second morning, as the state of the bowels and the heat of the skin seem to demand.

2nd. SCARLATINA MALIGNA, or ANGINOSA.—The *symptoms* in this form of the disease are in every respect the same as those already given under the mild form, only in each instance more aggravated, and more rapid in their coming on. The soreness of the throat is excessive, attended with stiffness of the neck, and frequently with swelling of the glands and tonsils, the whole of the mouth and fauces, when examined, being discovered in a highly inflamed and tumid state. The heat of the skin is painful, and the thirst inordinate. The eruption often assumes a striped appearance, looking like belts of a dark purple colour. Sometimes the rash recedes, then reappears, and again fades; the face and neck is swollen, the difficulty of breathing is very great, and an acrid discharge of phlegm and mucus from the mouth excoriates the adjacent parts; the head soon suffers, and delirium not unfrequently follows.

The *treatment* in the malignant form demands even more prompt attention than that accorded to the other. Though general bleeding is inadmissible, local depletion is often necessary, and the application of four, six, or eight leeches, if an adult, on the throat, or one or two on the breast-bone of a child, is often of the best effect. A blister to the throat, and an embrocation for the chest and back of the neck, composed of hartshorn, turpentine, and oil, is to be used, and should the blister not have been employed, the embrocation is to be carried round the throat, and a warm bran poultice laid on the part wet with the liniment; at the same time, acid gargles, such as the infusion of roses, with an excess of acid and cayenne vinegar, as in the formulary given below, must be employed. Take of—

Infusion of rose leaves	5½ ounces.
Diluted sulphuric acid .	20 drops.
Cayenne vinegar . .	½ ounce.

Mix, and make a gargle for an adult, to be used every four hours. See VINEGAR. The feet must be kept hot, the body cool, and the patient's room well ventilated. Some medical men recommend the frequent swallowing of lumps of ice, as well as applying it to the throat; but in following this suggestion care must be taken not to lower the heat of the body too severely. As a diaphoretic, to cool and moisten the skin, the following mixture will be found beneficial. Take of—

Carbonate of ammonia	1 drachm.
Camphor water . . .	5½ ounces.
Spirits of mindererus .	2 ounces.
Ipecacuanha wine . .	3 drachms.
Syrup of saffron . . .	2 drachms.

Mix: one tablespoonful every three hours to an adult, and a teaspoonful, or dessert-spoonful, in a little water, to a child, according to its age. Belladonna is regarded by some physicians as a remedy of singular benefit in malignant scarlet fever; but as it should only be employed by a medical man, we refrain from giving the mode of prescribing it.

As the eruption declines, and the symptoms abate, tonics, such as quinine or the bitter infusions, with iron or the mineral acids, are to be given, and the strength recruited by a better and more stimulating diet, with cold salt water baths, exercise, and change of air.

The period of desquamation is always a critical one, and the patient, during the period the dead skin is peeling off, should be taken great care of, and his body kept from all damp or cold streams of air. About three weeks after the subsidence of the disease, the skin of the face often becomes puffed, the legs and body swell, and a state of general dropsy supervenes. As this condition, sometimes called *scarlatina dropsy*, proceeds from debility, the remedies required are tonics, exercise, friction with camphorated oil, wine, nourishing diet, and change of air. See DROPSY.

SCHEELE'S GREEN.—A pigment; the arsenate of copper, an intense poison.

SCHEROMA. — An inflammatory affection of the eye.

SCHIRAZ WINE.—A light, aromatic Persian wine, much esteemed in the East, particularly by the Chinese.

SCHNEIDERIAN MEMBRANE.— The thick mucous membrane that lines the upper part of both nostrils, and over which the minute branches of the olfactory nerve are ramified. So named from the anatomist who first demonstrated the anatomy and the uses of this membrane.

SCIATIC. — So named from the ischium, one of the bones of the hips. Any organ or vessel appertaining to that part, such as the nerve, vein, artery, &c., of that region is called sciatic.

SCIATICA. — An extremely painful affection of the sciatic nerve; a species of neuralgia. The peculiarity of this disease lies in the fact that it is confined merely to the nerve itself, the pain residing exclusively in that cord, from the spot where it issues from the pelvis at the flat of the hip, down the thigh and leg, till it is eventually distributed over the top of the foot, the patient being able to describe with his finger the exact course of the nerve from the hip to the toes.

Sciatica is in general regarded as a rheumatic inflammation of the sciatic nerve.

The SYMPTOMS of this disease are too special and distinctive to require description: the acute pain along the course of the nerve is quite sufficient to define the nature of the affection, without any other descriptive feature.

The TREATMENT alone demands our

attention. In a first attack, when the pain often amounts to a degree of suffering scarcely bearable, the application of a dozen leeches on the hip, at the point where the pain seems to begin, is frequently attended with immediate relief, particularly if followed up with hot anodyne fomentations, rest to the limb, and a hot brick tied to the sole of the foot. When the attack comes on in paroxysms, as it often will do, and with the periodicity of neuralgia, dry cupping, accompanied with the following powder and mixture, taken as directed, will frequently break the duration and intensity of the attack.

Powder.—Take of—

Carbonate of soda . .	10 grains.
Ginger powder . . .	2 grains.
Quinine	6 grains.

Mix: to be taken two hours before the expected attack.

Mixture.—Take of—

Carbonate of ammonia	2 scruples.
Dover's powder . . .	2 scruples.
Camphor water . . .	6 ounces.

Mix: the fourth part to be taken half an hour before the expected attack, and two tablespoonfuls every four hours after, till the pain is abated. Great attention must at the same time be paid both to the state of the stomach and the bowels. When the attack has been induced by damp or cold, or has become a regular visitor in cold weather, a poultice of mustard and flour may be applied for half an hour to the hip, while the following liniment is being rubbed along the course of the nerve from thigh to foot.

Take of—

Oil of amber	½ ounce.
Sweet oil	2½ ounces.
Turpentine	½ ounce.
Spirits of hartshorn .	½ ounce.

Mix, and form an embrocation: to be used twice a day, night and morning.

If a less exciting liniment should be required, the common tincture of soap—opodeldoc—may be employed, and instead of the mixture, the following sedative pills taken. Take of—

Muriate of morphia .	1 grain.
Ginger	5 grains.

Extract of gentian . . enough to make into a mass. Divide into four pills: one to be taken every eight hours.

In cases of chronic sciatica, however, and where all ordinary measures have failed of relief, the employment of moxa *to the hip* for ten or fifteen minutes, and a suppository of 6 grains of solid opium for an adult man or woman, will afford a certain if not a permanent relief. When sciatica proceeds from any derangement in the urinary system of organs, 5 drops of turpentine on a lump of sugar, taken three times a day, is often of the best effect, and will afford relief when all other remedies fail.

SCILLA MARITIMA.—The botanical name of the Sea-onion, or Squill, which see.

SCIRRHUS.—A hardened or indurated tumour; the first stage of Cancer, or Carcinoma, which see.

SCLEROTIC COAT. — The dense, opaque, fibrous membrane, or external coat of the eye, situated beneath the thin texture known as the *conjunctiva*, and investing four-fifths of the globe of the entire eye, and so named from its firm, resistant texture. See Eye.

SCOPARIUS SAROTHAMUS.—The botanical name of the broom plant; a decoction of the broom tops, and an expressed juice of the fresh plant, being its two preparations in the Pharmacopœia.

The scoparius is only used as a diuretic in cases of dropsy, for which disease it is well adapted.

SCORBUTUS. — Sea scurvy. See Scurvy.

SCORIA. — The dry scum of earthy and other matters, which rises to the surface while metals are being fused. A chemical term for any refuse.

SCORPION.—A venomous reptile; a genus of articulated reptiles having poisonous stings situated at their tails instead of fangs, like most other venomous animals. See Bites, and Stings.

SCOTOMA. — A dimness of sight, causing a giddiness of the head.

SCOTT'S BATH. — This is an acid bath, at one time much used by a physician of the name of Scott in biliary affections and diseases of the skin. The bath was composed of 3 ounces of the diluted nitro-muriatic acid to every gallon of water.

SCOTT'S PILLS.—A very useful and mild antibilious pill, sold as a patent medicine under this name, and which has stood the test of experience for more than two centuries. The principal ingredients are aloes, scammony, gamboge, ginger, soap, and lamp-black. These are 4-grain pills, made very hard, and of a shining black colour.

SCRATCHES. — These are to the majority of people very simple affairs, but there may be circumstances—such as the thing by which the scratch has been done being impure, other matters lodging in the torn skin, or particular constitutions—that may cause a simple scratch to become a serious wound. If the scratch should inflame, and the parts around it swell, put leeches on the swollen part, spreading them about. In the absence of leeches, scarify the part with a clean, sharp instrument in several places to cause bleeding, after which poultice.

SCREAMING. See INFANT, and ADVICE TO MOTHERS.

SCROBICULUS CORDIS.—A little pit or hollow of the heart. A name given by anatomists to the depression observable at the bottom of the breast-bone and the ensiform cartilage, and popularly known as the pit of the stomach.

SCROFULA, OR THE KING'S EVIL.—This disease, which may lie undeveloped in the system for the whole lifetime, and may pass over one or even two generations, and reappear in the third or fourth descendant, is one of the most extraordinary, and at the same time one of the most interesting diseases with which the medical practitioner has to contend. Though scrofula, when developed, as in consumption, is one of the most formidable of diseases, it may yet exist ungerminated in the system with perfect impunity, in no way interfering with the health, or the conomy of the patient's body.

Scrofula seems to be a certain delicate Condition of the system—a finer and less obust organization of the body than is sually accorded to man,—and which, if ndisturbed by some special cause of ritation, may go through the term of a ng life without one check or injury; hile in other cases, the true exciting use having been applied, the virulence the disease, in one form or other, mmediately displays itself.

A scrofulous constitution, or a particular sposition to scrofula, may exist in the stem without evoking a scrofulous disse: thus, a person may inherit the seeds predisposition to consumption (which almost always the result of a scrofulous bit), or to mesenteric or other glandular largement, and yet pass through a long e without any disease deserving the me of scrofulous being called into istence. Scrofula, whatever aspect it y assume, may be developed at any e, even at the time of teething, or it y arise after fifty years, though the jority of cases occur between the fifth and fifteenth year,—females being more subject to the various forms of this disease than males. The end of winter and the beginning of spring are the seasons when the disease most frequently shows itself; and, again, it is more common in cold, humid climates than countries where the temperature is dry and warm.

The simplest form in which scrofula presents itself is as a chronic enlargement and ulceration of the glands of the neck; the structure of the diseased organs changing in colour from a pale fleshy hue to a firm, inelastic white, like cartilage, and finally, into that soft, cheesy appearance, the characteristic of the last stage of enlarged scrofulous glands. Such diseases usually attack young people between fifteen and twenty years of age. The next set of glands affected by this disease are those absorbent and lacteal organs known as the glands of the mesentery, by which the flow of chyle to the thoracic duct is cut off, and the child, as a consequence, reduced to a state of extreme emaciation. See TABES MESENTERICA, MESENTERIC DISEASE.

Scrofulous deposits also occur both in the muscles and the bones, leading to diseases of the joints, cartilages, and bones. Scrofulous abscesses are also by no means unfrequent. Surgical diseases, particularly in the form of lumbar or psoas abscesses, scrofulous or tubercular deposits, more frequently take place in the organs of respiration than elsewhere, resulting in the disease known as phthisis, or consumption. Scrofula, when it affects the glands of the neck, very often, after a certain course, dries up of itself, and effects a perfect and spontaneous cure: similar results sometimes take place when the system at large has become involved. As scrofula in all cases depends upon an impaired state of the nutrition, the natural or hygienic mode of TREATMENT resolves itself into a light, nutritious dietary, with those unctuous compounds which yield an abundance of fuel to the lungs—the animal and vegetable oils and fats, such as suet, olive and cod liver oil,—exercise in a dry, warm air, and the consumption of such an amount of animal and vegetable food as shall keep the system fully supplied with an abundance of healthy chyle. To promote digestion, and encourage appetite, tonics, composed of infusions of quassia, gentian, or camomile, with the bicarbonate of potass, in the proportion of 3 drachms to every 6 ounces of bitter infusion, should be taken three times a day, and, if necessary, a grain or two of quinine, in the form of a pill, night and morning; or the citrate of iron and quinine, given in mint water or infusion of calumba, may be substituted in delicate constitutions. For the glandular form of the disease, the remedy formerly in vogue was the solution of the chloride of lime, given in doses of from 5 to 10 drops, in milk or lime water, three times a day. The discovery of iodine in burnt sponge led to the employment of that article in the treatment of glandular swellings. The burnt sponge, however, soon gave way to the tincture of iodine, and subsequently to the hydriodate of potass and the iodide of iron, now regarded as specifics for this disease. In all the preparations of iodine, the quantity given must be gradual and progressive, till the maximum dose has been obtained, when there should be a rest of some days and a beginning again *de novo*. (See GOITRE.) Sea bathing, sea-water purgatives, and cod liver oil are among the last of the remedies.

SCROFULOUS TUMOURS.—One of the most general forms in which scrofula manifests itself externally, is in the form of enlarged glands, and these are generally the glands of the neck, ears, or throat. The disease shows itself by an indolent, tardy swelling of one or more glands of the neck, which after some weeks or months' continuance gradually assumes the suppurating process, and, eventually breaking, discharges a thin, unhealthy humour, which may either continue for a short time, slowly subside and then heal up, or the open ulceration may degenerate into a chronic and apparently permanent issue. The *treatment* of this class of surgical diseases has been fully entered on under the heading of Goitre, which see. It is only necessary to repeat here the names of the remedies most beneficial in this disease. Iodine and camphor ointment to the part; hydriodate of potass mixtures, or the citrate of iron and iodine; Plummer's pill; compound decoction of sarsaparilla; and when tonics are necessary, quinine, the bitter infusions, and the mineral acids; and finally, a generous diet, change of air, and sea bathing.

SCROTUM.—The loose, dependent skin in the male, which, hanging down from either groin, forms the receptacle for the testicle. A fine, delicate muscle, like the platysma myoides in the neck, called the *cremaster*, is expanded over the inner portion of the scrotum, immediately below the integuments, which has the property of drawing up, corrugating, and rendering firm and hard the cuticle above it, which probably a few minutes before was relaxed and flabby. This muscle may be regarded as one of the involuntary class, as when the part is suddenly exposed to the cold it may be seen at work drawing up the cuticle, independent of any volition or will of the man himself. The scrotum is liable, like the lip and breast, to cancer, particularly so among sweeps, who from the irritation of the soot are frequently attacked with a scirrhous disease of this loose integument, which if not relieved, in time may lead to the involvement of the organ within, and the loss of the testicle.

SCURF, OR DANDRIFF.—An unhealthy state of the scalp, causing the epidermis to peel off in minute scales. See SKIN, DISEASES OF.

SCURVY.—There are two forms of this disease,—the land and the sea scurvy. The first, called *purpura*, is a species of cutaneous disease, and is divided into two varieties—*purpura simplex*, and *purpura hæmorrhagica*,—in which the principal characters are discolourations, or livid spots on the skin, which in the latter or aggravated form of the disease amount to *petechiæ*, or irregular purple blotches on the body, legs, and arms, accompanied with considerable debility and occasional hæmorrhage; the gums becoming spongy, and bleeding on the slightest touch.

For the TREATMENT of this form of the disease, see SKIN, DISEASES OF. The form of scurvy, however, which is of most importance, though occurring both on sea and land, is, from the greater frequency with which it is met on the ocean, called *purpura nautica*, or *scorbutus* (sea scurvy).

The CAUSE of this disease is the absence from the blood of those mineral salts which, under the article FOOD, we have shown to constitute one of the necessary elements in the aliment of man—a state of that vital fluid which may proceed from living for a long time on one kind of food, or an aliment in itself poor, and insufficient to support the body in a state of health. Though the absence of a vegetable diet, or those articles of the vegetable kingdom which yield the salts and mineral ashes so necessary to perfect physical health, is most frequently the immediate cause of sea scurvy, an exclusive dietary of the richest animal foods, or those articles most abundantly charged with nitrogenous compounds, will induce this form of scurvy quite as effectually as the poorest aliment, or a continued course of rations of salt meats and a total absence of vegetables. Though this disease was formerly the scourge of the national and mercantile marine, and yearly carried off thousands of our best seamen, it is now but seldom heard of, rarely that it attacks our mariners, and still more seldom that it shows itself in the worst phase of its character; but though we now possess a remedy that, almost under every circumstance of privation and suffering, may be said to set the disease at defiance, it is necessary to describe—

The SYMPTOMS of this formidable state of the blood in its *worst* form, that the milder aspect, in which it now generally shows itself, may be understood. The symptoms begin with weariness and fatigue, loss of strength and spirits, and after a time all wish for labour or exertion. The face becomes sallow and bloated, the skin dry and harsh, an oppressive feeling is experienced about the heart; flying pains, particularly at night, flit over the body, the breathing is oppressed, and greatly excited by the slightest motion or muscular exertion. The pulse sometimes intermits, and is always quick and small; the gums swell, become spongy and livid, bleed on the slightest touch, and separate from the teeth, which become loose; the tongue is moist and pale, but clean, and the breath highly offensive; the skin becomes spotted with livid blotches, any pressure producing discolouration of the part, and the most trivial scratch or abrasion degenerating into a foul, unhealthy ulcer; the gums ulcerate, and old scars and wounds break ut afresh, discharging a thin, offensive ure. The joints become stiff and swollen, nd the muscles—particularly of the legs nd arms—contracted; the urine is clear, igh-coloured, and very acrid; rapid emaation takes place over the whole body; scharges of blood from the nose, ears, ums, stomach, and bowels take place; all e secretions are intolerably offensive; e appetite sometimes remains unimired; the faculties continue to the last uninjured, but the patient often expires hile being lifted from his hammock, or es from the exhaustion of being merely rned on his side.

The TREATMENT of this impoverished ndition of the blood, and debilitated ate of the body, is extremely simple, and nsists in a mere change of diet, abunnt meals of animal food when a poor, sufficient dietary has caused it, and fresh meat and vegetables when induced by salt provisions. In the times when scurvy raged like a pestilence in the navy, it was customary for captains of ships, when they made the first land, though only a desert island, to have their sick crews carried on shore and placed among the nearest grass and herbage, that, should no edible vegetables be found, they might browse off the pasture, an operation which they usually fell to performing immediately; while nettles, dock leaves, and any common herbage was boiled and given like spinach to those who were too weak to be moved to the shore with safety. From this it will be understood that *vegetables* of all descriptions are the best and the first remedies, with fruits, especially acid ones, and wine, porter, or stout, where the debility is great; cider, sweet wort, or an infusion of malt. The utmost attention must be paid to cleanliness, and the bowels kept regular by tamarinds and prunes, stewed together, or lenitive electuary, and by a small dose of Epsom salts where stronger remedies are required. The spongy state of the gums, and ulcerations of the mouth, are to be treated with a weak solution of chloride of lime, followed by a gargle of infusion of sage, with a little alum and tincture of myrrh. Contractions of the muscles require the parts to be fomented with hot vinegar and water, and followed by an embrocation of soap liniment and laudanum. For the pain at the heart and oppression of breathing, a mixture composed of—

Sweet spirits of nitre .	3 drachms;
Camphor water . .	5 ounces;
Sulphuric ether . . .	2 drachms,

should be employed, giving two tablespoonfuls every four hours; while for the pain that invariably attends the disease, opium must be given,—either solid (by the mouth or anus), or liquid, in the form of laudanum or the sedative solution. In addition to these means, change of air, friction of the body with the hand, and cheerful society, are indispensable. The discovery made at the end of the last century, that lemon juice acted as a specific in this disease, if given a few times every day, proved to be an inestimable boon to society at large; but as neither lemons nor lemon juice could be long kept at sea without spoiling, a means was sought for and ultimately discovered, by the aid of chemistry, to obtain the active principle of lemon juice in a shape in which it would keep any time, and under any temperature, without fermentation or injury; that article was citric acid, 20 or 30 grains of which, dissolved in water, was given for one dose. The great expense of this article, however, and the discovery that the lime fruit yielded an acid quite as beneficial as that of lemons, and in greater quantity, caused citric acid to fall into disuse, and lime juice became the recognized remedy for scurvy, both in the height of the disease and as a preventive against the attack of it during sea voyages. Since that time, and the passing of the law compelling every ship putting to sea for a voyage of more than a fortnight's duration to carry a certain proportion of lime juice, according to the number of the crew and passengers, that dreaded scourge of the British navy may be said to have ceased to exist. See EMIGRANT, CITRIC ACID, &c.

SCURVY GRASS.—There are two varieties of this plant, the English and the Dutch scurvy grass, both growing near the shore or on the margin of salt marshes; the latter variety, however, is regarded as the most efficacious as a remedial agent, the plant having derived its name from its efficacy in scurvy. The mode of employing this very useful grass is chiefly in the form of a decoction, or a few spoonfuls daily of the expressed juice in a little water.

SCYBALUM.—A name given by physicians to a peculiar state of the feculent contents of the bowels, in persons of a confined, costive nature; the fæces appearing more like those voided by sheep, only larger, and extremely hard.

SEAL, SOLOMON'S.—This plant, botanically known as the *Convallaria polygonatum*, is, though now entirely expunged from the Pharmacopœia, an herb of real and sterling excellence, particularly as an application to wounds, abrasions, and cuts, having the singular power of expediting the union of cuts and lacerations. The property, however, for which Solomon's seal is most celebrated is its cure of black eyes, or the eradication of the livid discolouring mark which, whether obtained in fight or by accident, is justly regarded as a most disreputable badge. The fresh root of Solomon's seal, if scraped like horseradish, and then moistened with vinegar, and applied to the injured part, will, if allowed to remain in undisturbed and close contact with the skin for a few hours, entirely remove all tumefaction and discoloration from the eye.

SEARCHING. See SOUNDING.

SEA-SICKNESS.—This most distressing condition of the mind or the stomach—for physiologists have not yet decided as to the real seat of the ailment—is one of the most exhausting and distressing complaints, for the time it lasts, that a person can suffer. Most medical men believe that the brain is primarily affected, and that the stomach is only secondarily influenced by the reaction of the sensorium. Whatever may be the immediate or exciting cause of sea-sickness, whether the motion of the vessel, or the effect produced on the eye by moving objects, and by that sense conveyed to the brain, as is now generally believed, it is of little consequence to inquire; we have practically only to deal with the effect of a cause, and that is generally quite enough to demand the whole of the doctor's attention. Before, however, entering on the subject of the cure for this prostrating and sometimes very serious malady, we wish to impress on our readers, and on all who may hereafter consult these pages, that sea-sickness, in seven cases out of ten, might be averted and rendered next to impossible, if every voyager, male and female, would, a few days before going on board, take one or two doses of aperient medicine,—a pill rufi, or compound rhubarb pill, night and morning, once or twice, for females, and a blue pill and black draught for men. Or ladies who cannot swallow pills may take a tablespoonful of magnesia, and six hours afterwards a Seidlitz powder, made with a double proportion of Rochelle salts. By this means, cleansing the stomach and bowels of all impurities or obstructions before going on board will, except with the very delicate and nervous, prevent the motion of the vessel, or the effect on the eye, having the power to react on the system, or cause those distressing symptoms so universally dreaded. When these precautions have not been taken, and if the voyage is likely to be a lengthened one, the first duty of the surgeon is to recommend the immediate adoption of those means which should have been taken before setting foot on ship-board, namely, to cleanse the stomach and open the bowels.

The TREATMENT of sea-sickness can only at best be palliative, especially when the most direct and natural means have been neglected. Everybody who has gone to sea and suffered the misery of a few hours' sickness, comes home with some nostrum, or some means of affording relief, acquired from his companions, and which, possibly having answered with the narrator, is set down as an infallible remedy in all similar cases. This is a very great mistake. With the young and healthy, a dry biscuit and cheese, with half a glassful of bottled stout, will often give immediate relief; for sustenance once received into the stomach, the organ becomes tranquil, and in an hour after is ready for the dinner it so lately repudiated. With the bilious and the nervous individual, a very different course must be pursued; to such persons the very thought of food is an actual torture, and if relief is to be given, it must be presented in any form but that of aliment. In the first place, such persons—indeed all sea-sick individuals—should lie on their backs on a sofa, close their eyes, or else avoid fixing them on any moving object, apply a napkin folded square, and wrung out of cold vinegar and water, on the pit of the stomach, and take 10 drops of hydrocyanic acid in water, repeating it if necessary once or twice, with an interval of two hours between each dose. Next to the hydrocyanic acid in value as a remedy is laudanum, taken in doses of 10, 15, or even 20 drops in a little water. One or two drops of creosote on sugar occasionally, is often found of benefit. Thirty drops of sal volatile in camphor water—a wineglassful—with a teaspoonful of brandy, will sometimes have a beneficial effect: to others, again, nothing is so grateful as cold water. Soda water with brandy, or common ginger beer, are remedies recommended by some as of paramount importance; but relying on our own experience in such cases, we recommend the horizontal position, swallowing a few bits of ice, the cold application of vinegar and water to the pit of the stomach, biscuit and cheese, with a small quantity of bottled stout, for the young, and the hydrocyanic acid or laudanum to those advanced in life. In very severe cases, the nitrate of bismuth, with quinine and ginger, must be prescribed as a tonic, and a small blister applied to the pit of the stomach. Sometimes a few effervescing draughts, composed of 20 grains of citric acid and 20 grains of bicarbonate of potass, dissolved separately in 4 ounces of water, a teaspoonful of brandy being added to the alkaline solution, and each liquid drunk separately, so that the effervescence may take place in the stomach, will, with the cold application to the pit of the stomach, afford permanent relief, particularly if quietude and the horizontal position are observed till the stomach is able to receive a little solid food.

SEA TANG, OR SEA WRACK.—A common seaweed, used to obtain iodine, and some years ago employed in medicine, when reduced to ashes, in cases of scrofula.

SEBACEOUS GLANDS.—A system of minute glands situated under the skin, the object of which is to secrete an oily fluid to lubricate that organ: these glands, though diffused over the whole body, are most abundant about the face and neck. These sebaceous follicles, as they are termed by anatomists, are so named from the word *sebum*, fat. In young people, and particularly among those who pay little or no attention to the state of their digestive organs, the ducts of these sebaceous glands situated on the face frequently become obstructed, from the thick nature of the secretion blocking up their channels, when small red pimples with hard bases and black points form over the face, giving a dissipated and unpleasant appearance to the youthful visage. When one of these pimples is pressed, a little hardened pus is forced out, which being of a spiral shape, with a black or discoloured point, has been popularly called a worm; the first part exuded, having become dark from exposure, has been supposed to be the head of the animal. As this disfigurement of the countenance proceeds from the secretion of the cuticular follicles becoming too thick and waxy to be exuded, thereby resulting in a crop of hard red pimples, the best, the quickest, and the most effectual remedy is the use of the hot bath, and friction with a rough towel, or what is still better, the employment of the Turkish bath, and shampooing afterwards. See SKIN.

SECALE CORNUTUM.—Ergot of rye, secale; the diseased spurs or grains of rye. See ERGOT OF RYE.

SECOND INTENTION.—A term used by surgeons to express that form of the healing process by which wounds and breaches of continuity are closed and healed up by granulation, cicatrization, and contraction, this term being the opposite of union by the first intention—the growing together of the smooth edges of a cut wound.

Healing by the second intention implies the formation of healthy pus, and a successive series of granulations. It is a mistake, however, to suppose that a deep ulcer or wound, called professionally a of some organ, such as the tears, saliva, gastric juice, bile, and several others. When medical men talk of the secretions, they generally mean the contents of the bowels and bladder, and those subordinate fluids adjunct to the operations of the stomach, and assistant in the function of digestion.

SECUNDINES.—The after-birth and membranes expelled after the expulsion of the child.

SEDATIVES.—A class of medicines less powerful than narcotics, employed to produce abatement of pain, and procure mental and bodily tranquillity. All the narcotics, in mitigated doses, act as sedatives. Setting these, however, out of the question, the purest sedatives are hyoscyamus, lactucarium, hydrocyanic acid, hops, poppy, Batty's solution, and hemlock (*conium*). See NARCOTICS.

SEED-LAC.—A resinous substance, produced by a species of ant, infesting certain kinds of trees in the East Indies, especially along the banks of the Ganges. Seed-lac and gum-lac are produced by the same insects, which appear to prey on the sap of the trees they inhabit, and then void the articles bearing these names, which are found under the bark of the branches of the trees. Seed-lac and gum-lac are only used in the arts, in varnishes, dyeing, painting, and in the manufacture of sealing wax.

SEIDLITZ POWDERS.—The cooling and grateful drinks prepared with these powders are too well known as refrigerant

mix, and drink while effervesci

SEIDLITZ WATER.—A medicinal spring in Austria, p purgative nature, the water nearly a quarter of an ounce o of magnesia—Epsom salts—in of liquid.

SELENIUM, AND SEI ACID.—Chemical products of of fahlum.

SELLA TURCICA. — The saddle. The name given by to a portion of the sphenoid bon resemblance to a high-peake saddle.

SELTZER WATER.—The saline effervescent German spa an alterative, tonic, and mild may be partaken of by the in occasional benefit, particularl small proportion of sherry is a as it always should be when beverage at dinner.

The constituents of Seltzer carbonate of magnesia, muriat (or chloride of sodium), carbon and an excess of carbonic acid

SEMEIOTIC.—An old mec relating to the signs and cha diseases.

SEMEN.—The spermatic s the male.

SEMI. — Half. The word used by anatomists and mec as—

SEMI-CUPIUM.—Half a b for the lower half of the body to many parts of the body. The valves which guard the pulmonary artery are so named. Semi-lunar cartilages are half-moon-shaped cartilages in the knee joint. The semi-lunar ganglion is a large and important knot on the course of the great sympathetic.

SEMI-MEMBRANOSUS. — A long muscle at the back of the thigh, whose action is to flex the limb backwards.

SEMOLINA, OR SEMOLA.—A light and wholesome food for invalids, formed from wheaten flour into small grains. By the mode of preparation, all the gluten of the flour is preserved, and only the starch and carbonaceous matters removed. This very useful and, as a food, valuable article, when prepared in Russia, is called either semolina or manna-croup, while that prepared in England usually goes under the name of semola.

SENEGA.—The name of a plant, used by the native Indians of America as a remedy against the venom of the rattle and other snakes.

SENGREEN (*Sempervivum tectorum*).—The common house-leek. This is one of the most popular of our native plants among the peasantry, and one which, from our experience, we can recommend specially as an external remedy to painful bruises and contusions, the fresh roots or tems being scraped and applied, with all heir moisture, to the injury. In cases f dimness of sight, the juice of the plant ropped into the eye is said to effect re-arkable benefit. It is, however, as an xternal application to ill-conditioned ores and ulcers, to abrasions, eruptions, uch as shingles, and contused wounds, at we regard sengreen as a most valuable medy.

SENNA.—The dried leaves of several arieties of the *Cassia senna*, the two most nportant of which, however, are the ast Indian and the Alexandrian senna, named from their respective places of rowth or export.

MEDICAL PROPERTIES AND PREPA-ATIONS.—Senna acts on the system as a trong and effective cathartic, and though pt to gripe in its operation, and somewhat eating in its nature, is a very useful and, r children, a very valuable drug. The riping tendency can always be prevented y the addition of a few caraway or oriander seeds to the infusion, while its eating qualities can be corrected by the ddition of Rochelle salts, which at the ame time adds much to the efficacy of its ction.

The preparations of the Pharmacopœia are—a powder of the dried leaves, of which the adult dose is from 1 to 2 drachms; the confection of senna (lenitive electuary), of which the dose for an adult is about 2 or 3 drachms; the compound mixture, of which the dose is from 1 to 2 ounces for an adult, and from 1 to 2 drachms for a child between one and three years of age; the syrup, the dose for a full-grown person being from half an ounce to an ounce, and for a child from one to three years old from half a teaspoonful to a dessertspoonful. The tincture is the next preparation of consequence, and the dose of that is nearly the same as the syrup; and lastly the infusion, the form in which senna is generally given. This is made by infusing half an ounce of senna leaves and half a drachm of bruised ginger in 10 ounces of water. The adult dose of this preparation is from 2 to 4 ounces, while from 1 to 4 drachms is the proportion for a child up to its fourth year. Any of the aromatic seeds may be substituted for the ginger; or manna, in the proportion of 4 drachms to the 10 ounces, may be added to increase its strength.

SENSES.—The faculties by which man is made conscious of external objects, can minister to his own necessities, and guard himself from dangers. These watchmen or sentinels of the body, whose vigilance is never wholly suspended, even in sleep, are named sight, hearing, smell, taste, and feeling, or touch. As all these impressions or faculties are produced in the same manner, by the stimulus of contact, there is, in reality, but ONE SENSE, and that is *touch*. The waves of sound, like the vibrations of light, and the floating particles of aroma, all stimulate the nervous extremities on which they fall, carrying to the brain the impression received, to be there translated into intelligence and harmony, exactly as the grosser contact of matter with our fingers is interpreted into hard or soft, smooth or angular sensation, as the impression is agreeable or harsh.

SENSORIUM.—The common centre or seat of sensation; the brain, the intelligence.

SEPIA OFFICINALIS.—The cuttle fish. *Os sepiæ*, the bone of the cuttle fish; a light, friable substance, kept in the form of powder, to mix with tooth-powder, for which it appears well suited.

SEPTIC.—Any substance producing

decomposition or putrefaction. *Antiseptics* are substances which prevent or correct that condition.

SEPTUM.—A division, shelf, or partition. The diaphragm is sometimes called the abdominal septum, as the centre cartilage of the nose, which divides that organ into two nostrils, is called the nasal septum.

SEQUELÆ.—The consequences of a disease; results that always follow as a natural sequence of some diseases. Thus the deafness, running at the ears, swelling of the glands of the neck, sore eyes, mesenteric disease, and dropsy, which often follow measles and scarlet fever, are professionally known as the *sequelæ*, and popularly as the dregs or consequences of those diseases.

SEQUESTRUM.—A name given by surgeons to the piece of dead bone which, in the disease called *necrosis*, has become separated from the parent stock, and sometimes remains for weeks under the muscles, till it works its way to the surface, or the surgeon cuts down and extracts it.

SERPENTARIA ARISTOLOCHIA.—The Virginian snake root; an article once supposed to possess tonic, diaphoretic, and antispasmodic properties, but now almost exploded from practice, though the Pharmacopœia still retains a tincture and infusion of the root.

SERPENTS, BITE OF. See RATTLESNAKE.

SERPIGO.—An eruptive disease of the skin; a kind of tetter. See SKIN, DISEASES OF.

SEROUS APOPLEXY, or the Apoplexy of Old Age.—A disease accompanied by symptoms similar, in many respects, to those of sanguineous apoplexy, but caused by the effusion of *serum* into the ventricles, or on the base of the brain. The immediate cause of this disease is general debility, physical relaxation, and a loss of tone in the capillary vessels; consequently, serous apoplexy is often the termination of some long and exhausting illness, or where the system has been injudiciously pulled down by bleeding.

The TREATMENT demands blisters or cupping to the neck and shoulders, tonics and stimulants, and such other remedies as special symptoms may seem to demand.

SEROUS MEMBRANE.—One of the important tissues of the body; a texture [illegible] in thin, transparent laminæ, [illegible] the form of a closed sac, and [illegible] by a thin, glairy fluid, exuded from a set of vessels ramified over its internal surface. The three most important membranes of this nature are,—1st, the *arachnoid* membrane, which lines the convolutions of the brain; 2nd, the *pleura*, investing the lungs and spreading over the thorax; and 3rd, the *peritoneum*, the lining membrane of the viscera, and the whole of the abdominal cavity. All these membranes are particularly liable to inflammation, as in *Meningitis*, *Pleuritis*, and *Peritonitis*, which see.

SERRATUS.—Jagged, or tooth-like. A name given by anatomists to a set of four serrated muscles of the ribs and shoulder blade, whose chief function is to elevate and depress the thorax; consequently they are muscles of respiration. These muscles are divided into the *serratus major anticus*, *serratus minor anticus*, and the *serratus superior posticus*, and *serratus inferior posticus*.

SERUM.—Whey; the watery part of the blood, which separates from and floats around the clot, or *crassamentum*, when the blood is drawn from the body. It is this saline, pale straw-coloured fluid that in cholera is poured out of the body, and by robbing the system of its strength makes the disease so dangerous. When, by a diseased action, serum is poured out in the brain, it produces *serous* apoplexy; when effused into the chest, *hydrothorax*; and into the abdomen, *ascites*, or dropsy.

SESAMOID.—A few very small bones, in the shape of a bean, attached to the first bone of the thumb and great toe.

SESQUI.—One and a half. A chemical term, expressive of the proportion of acid or oxygen a salt contains, as the sesquioxide of iron, or sesqui-carbonate of soda—that is, iron with one atom and a half of oxygen, or soda with one and a half quantity of carbonic acid in its composition.

SESQUI-HORA AND SESQUI-UNCIA are medical terms for an hour and a half, and an ounce and a half.

SETA.—The name of a small, thin worm, infesting the human body, in appearance like twisted horsehair.

SETON.—The only difference between an issue and a seton is that the former is a milder condition of the same remedy. The object for which a seton or an issue is established is to open a drain from the system, and by the discharge so kept up relieve some oppressed organ, or the system generally.

An issue may be made in several ways. The most simple method is that of ap-ing a small blister, and, after it has n, dressing the blistered surface twice ay with savine ointment, or a cerate le with Spanish flies; or an issue-pea y be inserted under the cuticle, and ined in its position by adhesive plas- till the irritation causes suppuration, ich is to be encouraged by placing two more peas in the sore so established, an amount of discharge is obtained icient for the object had in view. erever practicable, however, a seton uld be used in preference to an issue, being cleaner, more manageable, and more effectual. Setons are made by rting the end of a skein of silk or ning cotton under the skin, knotting h ends, and moving it about every day; an elastic India-rubber tape, which is l better, may be inserted in the same nner, and moved about every day as n as suppuration has commenced. The ts most frequently selected for setons the back of the neck, the elbow, arm, , and loins. The mode of effecting the on is to pinch up the loose skin between thumb and finger of the left hand, and h a long, flat, knife-like needle, called eton needle, threaded with a skein of k or cotton, or the elastic tape, held in right hand, transfix the fold of skin secured; the needle is then to be ached, the two ends of the skein sed, to prevent its dropping or being lled out, a poultice put on over the part, d the whole covered with a handker- ief. Every morning and evening the ing or tape is to be freely moved out, all the matter pressed out, the part shed with warm water, and a dressing simple ointment applied over the seton, th a bandage to keep the dressing in its ce. For sore eyes, deafness, pains in head, and other affections, a seton in neck is often attended with the best sults. Diseases of the elbow or hip- nt, with necrosis of the bones of the ine, are also benefited by the use of a ton over the disease. When a seton been employed for some time, care ust be taken not to dry it up too hastily, serious consequences may arise from an considerate suspension of the long-con- ued discharge.

SEVUM.—Fat. *Sevum ceti*, sper- aceti; *S. ovile* or *S. ovillum*, mutton et; and *S. preparatum*, strained or rified mutton or beef suet.

SHADDOCK.—A species of oragne ought from the East and West Indies, d so named from a naval officer who first transplanted this fruit from the East to the West Indies. The shaddock possesses all the virtues of the lemon and orange, and contains a large proportion of citric acid.

SHAKING PALSY. See PALSY.

SHALOT.—A mild species of garlic, extensively used in culinary preparations by the French, and sometimes employed medicinally as an expectorant and diuretic. See ONION, and GARLIC.

SHAMPOOING.—A peculiar kind of manipulation which the attendants at the Turkish bath perform on the bathers, by kneading and pressing the flesh, to relax and afterwards strengthen the limbs and joints. A process always of benefit, but in chronic affections of the limbs of great advantage to the patient. See TURKISH BATH.

SHELL FISH.—The whole tribe of shell fish, except oysters, are apt to produce sickness, headache, and all the characters of a surfeit; at certain seasons this effect is more frequent than at others When the symptoms are severe, an emetic should be taken at once, and an aperient afterwards.

SHERBET.—A cool and delicious beverage, a kind of lemonade, made with the juice of the lime, sweetened slightly with sugar, and flavoured. See DRINKS.

SHERRY.—One of the most useful of all our wines in a medical sense, and from having very little tartar in its composition, it is more suited to the patient or valetudinarian than port, which often acts on the bowels either to relax or confine them.

SHINGLES.—An eruptive disease of the skin, which, though occasionally attacking persons advanced in life, is most prevalent with the young, especially under the age of twenty, and will usually be found in the spring or autumnal seasons of the year. Shingles are always preceded by a certain amount of fever or constitutional disturbance, however slight, such as thirst, headache, nausea, cold chills, and lassitude. The eruption commences with irregular clusters of vesicles, with hard, inflamed bases; these patches gradually enlarge in their individual circumferences, and the elevation of their several vesicles, the fluid they contain becoming clear and shiny. In a few days this character changes, the transparent lymph becomes opaque or milky, and eventually dries up into a scab. Sometimes the several islands of vesicles unite and form a long belt over the chest and back, or down the abdomen and leg; at others they form a cincture round the waist, like a broad, irregular belt, from which circumstance the disease has derived the name sometimes given it, of *cingulum*, a girdle. The eruption is attended with a burning, pricking heat, and great tenderness over the parts affected: the disease may first show itself on the back or loins, on the breast or shoulders, or round the abdomen; sometimes, again, it is confined to the arm or wrist, round which it usually completes a circle. Shingles generally take three or four weeks to run their course, the scabs pealing off about the fourteenth or sixteenth day, leaving the skin covered with red, circular patches extremely tender. There is a very mischievous but popular prejudice with regard to shingles, a belief that if the zone round the middle of the body is completed, the patient will die: as the dread of such a result might have a serious consequence on a sensitive patient, the absurdity of such an impression should be at once explained.

The TREATMENT of this disease consists in giving mild aperients, with effervescing draughts, a change of diet, without a reduction of quantity, a little wine in the cases of persons advanced in life, and to those of a naturally weak constitution, with a sedative draught at bedtime, when the heat of the skin and the pain prevents the patient from sleeping. For youths and girls under fourteen years of age, one of the following powders, given every night, with two tablespoonfuls of senna tea, made with half an ounce of Rochelle salts in each 8 ounces, every morning, will in general be found sufficient, especially if the eruption is dressed with scraped sengreen, the whole being covered with a linen rag thinly spread with sugar of lead ointment. Take of—

Powdered rhubarb . .	36 grains.
Grey powder. . . .	18 grains.
Jalap powder . . .	36 grains.
Cream of tartar . . .	36 grains.

Mix, and divide into six powders: one to be given every night at bedtime. If the patient is thirsty, saline effervescing draughts, composed of 30 grains of bicarbonate of potass in half a pint of water, neutralized with 25 grains of tartaric acid, are to be taken twice a day. For patients of an age between seventeen and twenty, a compound rhubarb or compound colocynth pill two or three times a week, with a Seidlitz powder made with a double quantity of Rochelle salts on the following day; this, with a daily dressing of the part with the juice and scraped pith of sengreen, as already directed, will in most cases comprise all the treatment necessary. The popular mode of employing sengreen is to mix the scrapings of the plant with milk or cream, spread the mixture on linen, and apply it to the eruption: there can be no objection to either the milk or the cream, but if the plant, when bruised or scraped, has plenty of sap, they are not actually needed.

SHIP BISCUITS. — These, when properly made, are the best and the most convenient food on a long voyage, and particularly so for children, as, after soaking, they can be boiled and made into an excellent food for infants and those of tender years. Ship biscuits are made with the best wheaten flour, salt, and water, worked into a stiff dough, which must then be kneaded long and thoroughly, the biscuits perfectly baked, and then carefully packed, if possible, in tin-lined boxes, all damp and moisture being excluded, so that they may be kept hard and dry; for if they become soft, they very soon spoil, and are rendered unfit for food: on the contrary, if kept dry, they will remain good for years.

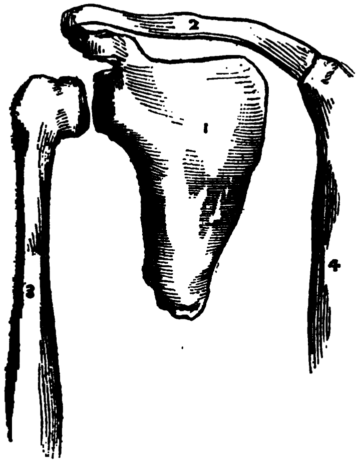
SHIP, CHOICE OF. See EMIGRANT, ADVICE TO.

SHIVERING.—This is a mild form of what medical men call rigor; a general trembling of the body, the result of some nervous disturbance; a symptom of fever, and, in *psoas abscess*, or any large collection of matter, a sign of the formation of pus.

SHOCKS TO THE SYSTEM.—These often serious consequences of sudden fright, of blows, falls, and various accidents, require much judgment in their treatment. The patient should be laid on his back in bed or on a sofa, kept perfectly quiet, have hot bricks or vessels of water applied to the feet, and, according to the violence of the shock, to other parts of the body. A mixture of brandy, sal volatile, and water should be given every five or seven minutes in tablespoonfuls for a few times, or till some evidence of reaction sets in.

When there is a total loss of consciousness, the patient is to be treated precisely as if it was a case of congestion, compression, or concussion, care being taken that no liquid is put into the mouth till the power of swallowing is restored. Equal care must be taken that too much stimulant is not given, for fear of the after consequences of reaction and inflammation.

SHOULDER, THE.—There are three bones which enter into the formation of this part of the body—the *scapula*, or blade-bone; the *humerus*, or bone of the arm; and the *clavicle*, or collar-bone,—which, with ligaments, muscles, and integuments, complete the entire anatomy of the part. The accidents to which the bones and muscles are subject are fracture and dislocation of the bones, and contusion of the soft parts, an injury to which the muscles and integuments are liable from blows and falls from horses. These accidents will be found under the name of each class of injury. See FRACTURE; ARM, BROKEN; and DISLOCATION.



SHOULDER.

1. Scapula. 2. Clavicle, or Collar-bone. 3. Humerus, or Arm-bone. 4. Sternum, or Breast-bone.

SIALOGOGUES.—A class of medicines which produce an increased flow of saliva. Of these there are both vegetable and mineral. The former embrace most of the pungent plants, particularly sorrel, tobacco, pelletory root, and mezereon; of the latter, several of the metals, when taken constitutionally, especially mercury. The first are called *masticatories*, because the effect is produced by merely chewing the article.

SIBBENS.—An infectious disease peculiar to the West of Scotland, and supposed to be analogous to the West Indian disease known as the yaws, or *frambœsia.*

SICK HEADACHE.—This species of headache, commonly known as bilious headache, is the most frequent form of all cephalic affections to be met with in the practice of physic, and the most painful of all the varieties of cerebral diseases to which the invalid or the intemperate feeder is liable. *Cephalalgia dyspeptica*, or *cephalalgia sympathetica*, as this form of the disease is professionally called, may either arise from indigestion, consequent on some crudity or irritation of the stomach, or from a redundancy of bile, or from a biliary obstruction; or, according to its last name, it may proceed from sympathy with some other part or organ.

The SYMPTOMS of sick headache usually commence in the morning with a settled pain over the left eye or right temple, and sometimes on the top of the head or centre of the forehead. In other cases, the patient, on waking in the morning, is conscious of a diffused aching weight over the whole head, which by degrees settles into a dull, heavy pain, either in one or the other temple, over the eyes, or on the top of the head. When the pain is severe, nausea, sickness, and sometimes vomiting follows; while in all cases there is more or less of dimness of sight, ringing in the ears, and confusion of ideas, with heat, languor, restlessness, and those febrile symptoms so characteristic of constitutional disturbance.

The TREATMENT is often very simple, and in some cases the attack cures itself, or the symptoms yield to the simplest remedies: thus, a cup of tea or coffee, a mouthful of biscuit, or a few drops of sal volatile in a wineglassful of cold water, peppermint, or camphor water, will often afford immediate relief,—the weight and pain in the head, noise in the ears, heat of eyes, and dimness of sight, all frequently passing off like a mist, and leaving the patient quite free from pain or oppression. In some instances the nausea, when severe, excites diarrhœa, when the first action of the bowels is almost certain to produce a cessation of all the distressing symptoms.

When the patient is young and robust, a 5-grain blue pill, followed in a few hours by a black draught, or 6 drachms of Epsom salts and 2 drachms of magnesia, dissolved and mixed in half a tumblerful of water, will, in most instances, afford effectual relief. To the person periodically affected with sick headache, a teaspoonful of Gregory's powder in peppermint water, with 30 drops of spirits of sal volatile, should be given as soon as possible, and taken from the room, and no utensil brought back until well cleaned and dried. The temperature of the sick-room is always a matter of considerable importance, and that the degree of proper warmth may always be understood and maintained, a thermometer should invariably form a part of the appurtenances of the sick-room, the instrument being placed against the wall in such a position that the nurse's eye may frequently notice its silent admonitions. Though 60° Fahrenheit is regarded as the standard degree of temperature, it is often desirable to reduce that amount to 59° or 58°, or indeed even lower in some cases of hæmorrhage. To effect this, a strong current must be established, either by partially opening the door or window, or by lighting a small fire for a few minutes in the grate, and, lastly, by the means of evaporation to be presently described. When it is necessary to raise the temperature above 60°, the strong currents of air are to be suspended for a time, the door and window securely closed, and a fire lighted in the grate, and the reading of the thermometer carefully attended to till the desired temperature has been reached, care being then taken to prevent the heat increasing or fluctuating.

VENTILATION.—A free and perfect ventilation is one of the most necessary properties of the sick-room, as on it depends so much of the comfort of the patient, as well as much of his hopes of a final recovery. To convey a clearer idea of the importance of good ventilation to the welfare of the invalid, it will be sufficient if in this place we mention that a healthy man, enclosed in a room, requires FOUR CUBIC FEET of fresh air *each minute* for the due performance of all his functions, and that he vitiates, or renders poisonous, about A HUNDRED AND THIRTY CUBIC INCHES *every minute*, by expiration from the lungs and skin. If this fact is borne in mind, the absolute importance of an abundance of pure air to the patient will become still more evident, especially as, in some diseases, an increased amount of oxygen becomes a vital necessity. Independent of supplying an abundance of pure air to the patient, ventilation is of the utmost consequence, not only in purifying the room, but in carrying from the atmosphere that surrounds the sick person those minute particles of morbific matter which are always given off from an unhealthy body, and, especially in certain contagious diseases, load the air with their poisonous particles, and which, if imbibed into the lungs of a healthy person, may there germinate into another poisonous disease, besides being re-absorbed by the invalid himself, thus keeping alive a malady which, by exhalation and free ventilation, might have been weakened and greatly benefited. The two great sources of ventilation are the window and the chimney; the one carrying off the upper stratum of impure air, and the other those heavier gases and impure atmosphere which specific gravity keeps floating over the surface of the floor. As the door in both instances is the direction from which the current of fresh air comes, care should be taken that no mat inside or outside impedes the free access of air, and should the door fit tightly above to the lintel, a plane should be passed along the top, to allow of the entrance of a stream of air from the passages beyond. The *top* sash of the window is the only part that should be opened, and that but for the space of a few inches, merely sufficient to cause a strong draught, and this only from time to time, as occasion may require.

Should the window not open from above, a piece of the top of each corner pane should be broken out, and a slip of pasteboard nailed to the frame above, to hang down like a valve over the broken glass, and which can be pushed up or let down, according as ventilation is required. The effluvium which sometimes pervades a sick chamber, and which is quite as hurtful to the patient as it is offensive to the healthy person who imbibes it, cannot be overcome by mere ventilation, as the draught necessary to do so in a reasonable time might be of serious consequence to the patient; nor must any attempt be made to overpower one smell by the establishment of another, such as by the burning of brown paper, feathers, sprigs of lavender, pastilles, or aromatic vinegar, —articles which are all, except pastilles, excellent in their place to refresh the atmosphere of a sick chamber at proper times, but become most objectionable when offensive odours are present. In all such cases, disinfectants alone should be used, and as chloride of lime is so extremely cheap, there can be no excuse for not employing it on all occasions. A teaspoonful of the chloride, dissolved in half a pint of water, and used in the following manner, will soon correct all unpleasant smells. Having dissolved the chloride of lime in a basin, a napkin is to be dipped in the solution, roughly squeezed out, and then suspended on a line between the door and window, and the rest of the solution poured into a couple of saucers, and placed on the ground for about a quarter of an hour, when the ventilator being opened for a few minutes will leave the air of the chamber perfectly pure. Linen rags, or a towel wetted in chloride of zinc or tin, or the nitrate of lead, and waved about the room for some time, will answer the same purpose, and equally as well. See VENTILATION, and DISINFECTANTS.

ATTENDANCE ON THE PATIENT.—It cannot be too strongly impressed on the mind of all who may be called on to minister to the wants of the sick, that every attention given, every service rendered, should be performed with the least possible noise and demonstration,—the step should be light and noiseless, the voice low and kind, and the service, whatever it may be, rendered with gentleness, care, and despatch, but in no hurry or officious haste. Rattling of windows, slamming of doors, creaking shoes, sudden noises, exclamations or fidgeting, monotonous sounds—as the ticking of a watch or clock, the rustling of dresses, or the leaves of a book—are all to be guarded against as things of serious import in certain conditions of the nervous system; on the same account, a restless or over-officious nurse —one who moves much or unnecessarily about the room—is likely to be more injurious than useful. Care must be also taken not to admit more than two visitors at one time to the bedside, and any loud-speaking or boisterous-mannered friend must be strictly prohibited. In visiting a sick friend, the person admitted should ask as few questions as possible, avoid the mention of any distressing intelligence, eschew all medical themes, and confine his conversation to any light and agreeable intelligence; being always careful not to weary the patient by more than a few minutes at a time of his company. In all cases of a healthy person visiting a sick one, it is of the utmost consequence that he should place himself, whether standing or sitting, in such a position that the air from the door or window may come from *behind the visitor* to the patient, and *not from the patient* to the friend; he should also avoid leaning over the bed, or inhaling the breath of the invalid, or indeed of coming in too close contact with the clothes or person of the patient. The personal cleanliness of the patient is a matter of very great importance: the face, neck, and arms should be well washed, and the skin afterwards rubbed thoroughly dry with a fresh towel every morning; and as great refreshment is experienced by washing the face and hands occasionally during the day, such means of affording relief and comfort should never be forgotten; the clothes worn during the night should never be allowed to remain on the body in the day, but as soon as the morning washing is over, clean clothes should be put on, care having first been taken to air thoroughly all linen before it is used, that which is taken off being well aired before being put away for the use of the night. The importance of attending to the thorough airing of every article before being put on the patient's body will be understood when we state, that so great and continuous is the evaporation always taking place from the water, the surface of the walls, and the bodies of the patient and nurse, that a nightshirt kept in the sick chamber for twenty-four hours, and weighed before and after drying, was found to have lost four ounces, or *a quarter of a pound in weight*, by the driving off of that amount of water, absorbed by the nightshirt in one day and night. From this it will be seen what a large proportion of watery vapour is taken up in a few hours by the different items of our daily wear, the amount retained by linen and cotton being, of course, very much less than that taken up by woollen and more porous garments. Where the whole of the patient's body cannot be washed every day, the lower extremities, and as much as possible of the rest of the trunk, should be freely rubbed with dry towels.

DUTIES OF THE NURSE.—Of the moral and physical qualities of the nurse we have already spoken, under the head of Nurse, which see; it only now remains for us to point out the duties which devolve upon that individual when in charge of the sick-room, and entrusted with the responsibility of the patient during the absence of the medical man. In the first place, the nurse should regard herself, and be so considered by the relatives and friends, as the doctor's *locum tenens*, and invested with absolute control over the patient and sick-room during his absence. It is to the nurse, or that member of the family who officiates as such, that the physician conveys his instructions; to him she makes all her reports, and to her general discretion he commits the well-being of his patient during that long portion of every day in which he is necessitated to absent himself from the bedside of the invalid. To the nurse's judgment is left the duty of preventing too many visitors from seeing the patient at one time, or in one day, and of taking care that he is in no way tampered with, and nothing in the way of food, fruit, or drink given to him, on any pretence whatever, if opposed to the regulations laid down by the doctor. A few spoonfuls of what may be deemed a grateful and harmless substance, to those who plead for its being given, may, if it should not prove actually hurtful, counteract the effective operation of some medicine on which the physician has relied for beneficial results. These, then, are two important duties devolving on the nurse, and which she should never allow herself to be overruled in executing. The dress of the nurse, besides being, like her person, always scrupulously clean, should be of some unobtrusive colour, and of a material that will make no rustling noise when she goes about her duties. The cleanliness of the room, with that of the glasses, cups, and every utensil or article used, cannot be insisted on too forcibly; she should range all the bottles on the reserve table, as we have directed, with the label of each turned outwards, and make a practice of never giving any medicine without first *looking at the direction*. She should have a small slate always at hand, on which to make notes of any special instruction given by the doctor, or of facts that may have occurred in his absence. She must remove to another room all that passes from the patient, which, unless kept for after inspection, should be directly emptied; have the vessels washed out, rinsed with chloride of lime, and dried before returning them to the room. If the secretions are to be kept, she must be careful that nothing is thrown in, or mixed with them, as their entire character may be altered by emptying medicine, tea, or other articles on either.

The personal cleanliness of the patient is one of the nurse's first duties, for, besides the daily washing of the face, neck, and arms, it sometimes affords him great comfort to have the same operation repeated in the evening, and if the skin is washed with warm water and soap, and then properly dried, there is no fear of his taking cold. If the patient can bear the fatigue, clean linen night and morning should be put on, each change being first properly aired. When he is able to lie on the sofa for a few hours, or sit up in the easy chair, the nurse should carry away all the bedclothes, and expose them in another apartment to a free ventilation. When the patient—unable to bear the fatigue of removal to the sofa—has to sit up in bed, the nurse must contrive some support for his back; and for this purpose a child's chair placed at the head of the bed, and protected by one or two pillows, will afford a comfortable rest for the back, when, if the lately invented bed-table, which, attached to the side of the bed, and extending its leaf over the clothes, can be procured, he may sit for hours, and take his meals with tolerable comfort. When the patient has to be moved, and the nurse is unable to carry him bodily from the bed to the sofa, she and another should make a chair of their arms, and, lifting him at the same time, remove their burden with as little jar or fatigue as possible. When, from exhaustion, this method is impossible, the patient must be taken up bodily by four persons in the sheet on which he lies, and in that manner transported from one bed to another. There is one most imperative duty of the nurse in cases of long sickness, where the invalid is compelled to remain long in one position, and that is a daily and accurate inspection of the skin of the back, so as to be able to detect the first approach of injury from pressure, and so guard against the serious consequences of bed-sores; this she must effect by dusting the part that looks angry with violet powder, and, by placing air cushions under the body, relieve the place affected from further pressure. The nurse should also know, that in inflammatory diseases, if the first dose of medicine produces sickness, she must not therefore withhold the second; that if a sudden emetic is wanted, a teaspoonful of salt or a tablespoonful of mustard, in half a pint of warm water, will produce vomiting; that to increase the action of saline aperients, draughts of water are necessary; while to promote perspiration, warm drinks, extra bedclothes, and hot water to the feet are required. Of all the qualities of a good nurse, however, that of being willing to follow implicitly the directions of the medical man is unquestionably the best, and she who will conscientiously do this, may be safely trusted in all else.

SICKNESS, GREEN. See CHLOROSIS.

SIDE, PAIN IN THE.—The pain so often experienced in the side may be indicative of internal inflammation, of congestion of one or more organs, or it may be the result of rheumatism. The liver, spleen, and kidneys are the organs generally affected when the pain is low down, and the lungs and pleura when over the ribs. When the pain is on the right flank, the liver is the organ affected, and when in the left, the spleen. In all such cases the pain is symptomatic, and can only be relieved by the means prescribed for the disease that causes it. When the pain in the side is sudden and sharp, arresting the breath and preventing for a time all motion, the hot bath will always afford relief; or if that is not to be procured, hot fomentations, with a draught composed of half a drachm of sal volatile, 20 drops of laudanum, and 10 drops of ether, in a wineglass of camphor water, will in general subdue the spasm or stitch, as the pain is sometimes popularly called. When the cause of the pain is rheumatism, an embrocation, or mustard and flour poultice, will afford relief.

SIDERATIO.—A disease supposed to be induced by the influence of the stars. Erysipelas of the head and face.

SIGHING.—This is a succession of inspirations, and deep, unconscious expirations, often the result of mental anxiety. According to a popular belief not yet wholly exploded, a person is supposed to lose a drop of blood with every sigh. Shakspere alludes to this fallacy when he makes one of his characters talk about "blood-drinking sighs." That the habit of giving way to this state of melancholy is hurtful, by imperfectly inflating the lungs, is undoubted; but as regards the loss of blood at every sigh, the idea is preposterous.

SIGHT. See VISION.

SIGMOID.—A name given by anatomists to the valves which guard the pulmonary artery, named from their resemblance to a segment of a circle. The term is also applied to a part of the large intestine—the colon,—where it forms a sort of double curve in the pelvis, called the *sigmoid flexure* of the colon.

SIGNS OF DISEASE.—This is a term sometimes erroneously used, as if it were synonymous with symptoms. A sign is some characteristic peculiar to a certain disease; thus cough, expectoration, difficulty of breathing, hectic fever, &c., are symptoms of consumption, but not peculiar to it. Cavernous respiration, and pectoriloquy, however, are *signs* of consumption, &c. Physical signs are such characters as are evident to the senses, as the beat, swelling, and redness in inflammation, pectoriloquy in phthisis, and coagulable urine in disease of the kidneys. See SYMPTOMS.

SILICA.—Flint, or fine particles of flint. From this word we derive *silicious* earths.

SILK, OILED.—Silk so prepared as to be rendered impervious to water or grease, and employed to lay over dressings of wounds, to keep the clothes from being stained by exudation.

SILVER (*Argentum*).—The only preparation of this metal used in medicine is the Nitrate of Silver, or Lunar Caustic, which see.

SILVER, QUICK. See QUICKSILVER, and MERCURY.

SIMARUBRA AMARA CORTEX.—A bitter bark, obtained in the West Indies from the mountain damson tree, and at one time much used as a tonic bitter in infusions, but now almost exploded. Its properties are almost the same as calumba or quassia.

SIMPLES.—The name applied to all medicinal herbs and plants.

SINAPIS.—Mustard; of which there are two kinds,—the *Sinapis Nigra*, or black mustard, used for culinary purposes when ground, and for poultices and emetics; and the *Sinapis Alba*, or white mustard, used whole, as an emmenagogue.

SINAPISM.—A medicine made with mustard. A mustard plaster or poultice.

SINCIPUT.—The fore part of the head—the forehead—distinguished from the occiput, or back part of the head.

SINEW.—The tendinous portion of a muscle.

SINGING OR RINGING IN THE EARS.—A symptom of certain affections and diseases of the head and brain, usually indicative of congestion, or an excess of blood, as in apoplexy. It may also proceed from some mechanical obstruction—as the presence of wax in the ears, or the enlargement of the glands of the neck pressing on the vessels of the part, and thereby causing a local congestion. For the former, bleeding or blisters are the only means of cure; for the latter, fomentations, embrocations, and syringing. Singing in the ears sometimes arises from some disordered state of the digestive organs, when the treatment recommended in Indigestion and Stomachic Affections is to be adopted.

SINGULTUS.—A convulsive motion or spasm of the diaphragm, and commonly known as Hiccough, which see.

of this section are *variola*, *vaccina*, *varicella*, *ecthyma*, *cuperosa*, *mentagra*, *impetigo* or running tetter, *tinea*, *porrigo*, and *acne* or stone pox. They are all characterized by circumscribed elevations or pustules on the skin, containing pus or a fluid not serous, and which drying, terminates in scabs or crusts, which fall off. The *treatment* consists of a low diet, an emetic, and saline purgatives, with the warm bath.

4. VESICULÆ, OR VESICULAR DISEASES.—The chief affections under this head are miliary eruptions, *herpes*, *zona*, *psora* or itch, and *eczema*. The leading characters are small, transparent vesicles, filled with a serous fluid, in time becoming opaque, and sometimes filled with pus. These break, and are attended with itching and swelling, a number of vesicles running together and forming an irregular-shaped blister, filled with an acrid lymph, inflaming all the parts on which it runs. The *treatment* begins with the warm bath, aperient saline medicine, an entire change of food, alteratives, with tonics and the mineral acids, and fumigations.

5. PARASITICAL DISEASES.—Of this order there are several varieties, though only two of sufficient importance to require a special notice,—one the result of vegetable *fungi*, the other of insect life,—these are the *tinea tondens*, and *scabies*. The first we have already treated of under Ringworm, a disease now proved to be caused by a minute fungus parasite attaching itself to the stem of each hair as it issues through the cuticle. This disease, we have shown, is easily treated by local applications and the internal employment of sulphate of potass in 1 drachm doses in water, two or three times a day. The other disease, called scabies, or

The ITCH, is now known to proceed from the presence of a small insect, in the first instance engendered by dirt. In all its outward signs, scabies exactly resembles the vesicular order of cutaneous disease, one of the affections under that arrangement being known as *psora*, or itch, differing however from the true *scabies* in not being propagated by a parasite.

Itch arises from the presence of a little insect called the *acarus*, or the *sarcoptes hominis*, which burrows in the skin, and there deposits its eggs. The parts chiefly selected by this parasite are between the fingers, at the wrists, bends of the elbow, between the shoulders, the thighs, ankle and toes, and the roots of the hair, or where the skin is thin or lax, while in very severe cases it infests the whole body. The itching, always severe on approaching the fire or getting warm in bed, often becomes intolerable; this irritation inducing *papillæ*, which soon pass into vesicles, and finally into pustules, which eventually break under the patient's scratching, and the poisonous lymph, loaded with animalculæ, being effused, still further propagates the eruption, the face being the only part of the body free from this insect's attack. The *treatment* of itch was, before the nature of the disease was understood, extremely complex and tedious. All that is now necessary is to exclude the air from the insect by rubbing in plenty of firm grease, such as spermaceti ointment, so as to block up the pores of the skin, and exclude air from the *acari*, when in a few hours the disease will be cured by the suffocation of the hateful little enemy. Sulphur ointment is the article generally employed for the purpose, in the belief that the sulphur exercises a corrective influence on the skin; but strictly speaking, it is not necessary. Whichever article is used, it should be so well rubbed over the parts as to smear the skin effectually with the grease; the body should be then enveloped in a sheet, the hands and feet covered with gloves and socks, and the patient put to bed; in the morning a warm bath and plenty of yellow soap are to be employed to remove the grease, and the same plan repeated night and morning for one or two extra occasions, to make sure of a successful result; a sulphur bath the following day, and a final hot bath, should be employed to make assurance doubly sure; at the same time there should be a complete change of diet. If a rapid cure is desired, and the patient can command the means, he should take a hot bath, and while in the water be vigorously scrubbed with *yellow soap and fine white sand*, so as to break all the pustules and force out the parasites; he is then to be quickly dried, and the body anointed with sulphur ointment, wrapped in a sheet, as already described, and put to bed; the warm bath in the morning, and a sulphur bath some hours later, will effect a radical cure; he must be careful, however, to wear no garment formerly used till purified by washing. Those who object to the smell of sulphur may sponge the body with a lotion of the iodide of potassium, made with rose or elder-flower water.

In all diseases of the skin, the tepid, the warm, or the hot bath will be found one of the most valuable of remedies. In those cases where there is much nausea, an emetic should be given as early as possible; and in all obstinate eruptions, frequent doses of sulphate of potass, in the proportion of 1 drachm to 4 ounces of water, should be taken every four, six, or eight hours, while as a tonic and corrective, the compound decoction of sarsaparilla, with the mineral acids, must be regarded as an indispensable remedy to a permanent cure. For those diseases not specified in this arrangement, see the subject under its proper name. All the diseases belonging to the head of Parasitical are *contagious*, because their germs, whether fungi or insects, can be removed from one person to another, and contaminate all on whom they alight.

SKULL.—By this term is understood the bony vault containing the brain; a dome-shaped case, composed of eight bones,—six proper to the skull, and two common to the head and face. The bones forming the skull proper are the frontal and occipital bones, the parietal or two wall bones, and the two side or temporal bones,—in all six. The two bones belonging to the head and face are the sphenoid and ethmoid bones, which serve the purpose of key-stones, to fix the arch below, and close in the cavity. The manner in which these bones are united together to give strength to the skull, and prevent the extension of an injury, will be shown under the article Suture, which see.

SLEEP is that state of repose or mental oblivion so necessary to the recruiting of the fatigued body, and is partly owing to the exhaustion of the nervous system, partly to the absence of all impression on the nerves of sense, and also in part to the languid circulation of the blood through the brain, the pulse always becoming slower as night approaches, and whenever the body assumes the horizontal position. The process of digestion, when the food is light, favours sleep, though sleep itself prolongs digestion. In sleep all the involuntary functions, as those of respiration, circulation, and digestion, go on as usual, only, as we have just observed, in a more tranquil state, while all the voluntary powers are suspended. A certain amount of sleep is necessary to all animal life, to recruit exhausted nature, and give the wearied functions time to recover their elasticity and strength. The amount of sleep necessary to man depends greatly on the constitution of the person, or on circumstances. The young and the old and the infirm require more sleep than the strong and full-grown; but, as a general rule, seven hours may be regarded as the maximum period required for healthy repose. All medicines meant to act on the constitution by slow absorption *should be given* at bedtime, that they may be taken into the system during the hours of sleep; at the same time, medicines meant to act on the skin and kidneys operate more effectively when given the last thing at night, as during the hours of rest or sleep the body is more favourable to the action of diaphoretics and diuretics than at other periods.

SLING.—In cases of fracture a sling for the broken limb is often of the greatest consequence, and slings are now made of all sizes and for all parts of the body, from a swinging cot for a broken leg, to an entire bed, which, like a flat hammock, keeps the whole body in a state of suspension. For street accidents of a serious nature a sling may be extemporized by tying the four corners of a sail-cloth, blanket, or sheet to two poles, on which the sufferer may be placed, and then, swung on four men's shoulders, the person may be carried home or to a hospital without causing him much suffering, and without the fear of his rolling off.

SLOUGH.—The dead tissue of an ulcer, or a mortified portion of the integument which is separated from and thrown off the healthy part after some severe inflammation. In cases of sloughing, or the separation of the living from the dead parts, it is often the duty of the surgeon to assist nature in its operation not only to get rid of a useless source of annoyance, but to correct the foul odour that always attends sloughing. To destroy the fœtid smell, a solution of chloride of lime, as a lotion, is often necessary; and to detach the dead from the living parts, a stimulating lotion or a warm poultice is requisite. When the sloughing is in the mouth, hot poultices to the throat, and warm gargles or inhalation of steam are required for the purpose of separating the dead parts.

SMALL-POX, or VARIOLA.—This dangerous and much-dreaded disease, at one time more feared and often more fatal than cholera, is still, in defiance of all the precautions of parliament, the skill of science, and improved ventilation, at times as virulent as ever, though, fortunately, its progress can now be circumscribed, and its potency in time arrested.

Small-pox belongs to that group of diseases classed as specific blood diseases, is one of the exanthemata, and highly infectious. One peculiarity of this disease lies in the fact that several days, and, in some cases, weeks elapse after exposure to the infection before the disease indicates its presence by the first symptoms,—that time, however, always varying from seven to fourteen days; this interval is called the period of "incubation," and in severe cases is usually shorter—between five and seven days. There are two varieties of small-pox—the DISTINCT OR BENIGN, and the CONFLUENT; the former the mildest form of the disease, where the eruption comes out and matures in distinct and separate vesicles, and the other the most severe variety of the disease, where the rash comes out thick, and, as the case advances, runs together in one mass of suppurating mischief.

In the usual form of the disease the SYMPTOMS commence about the twelfth day with rigors or shiverings, attended with great pain in the back, head, and loins, with nausea and extreme pain in the stomach if pressed, the sickness being soon followed by vomiting. The skin becomes hot and dry; the pulse is quick and full; there is often drowsiness about this period, and sometimes coma, and even convulsions, if the patient is young. About *four* days from the first symptoms, though sometimes on the third, a rash of small, hard, red pimples breaks out on the face and neck, and by degrees extends to the arms, body, and legs. A peculiarity of this eruption, when first visible, is, that though evident to the touch, pressure expunges it, but only for a few moments. From the first appearance of the *papulæ*—the pimples—to the fifth day they gradually enlarge, and become distinct, round, and flat, with a slight depression on the top of each. The pimples, or *papulæ*, have now become bladders or vesicles, filled with a transparent colourless fluid, and what is called the first stage of the disease is over, which is generally by the end of the sixth day from the first appearance of the eruption.

The disease may now be said to alter its character; the poison has been thrown out of the system, and an inflammation of the skin commences. From the sixth to the eighth day the *maturating* process, as it is called, is taking place; in other words, the transparent colourless fluid in the vessels is undergoing another change, and by the inflammatory action existing being converted into matter or pus, each vesicle becoming in reality a small abscess. In the two or three days in which this ripening process is taking place each poc is losing its original colour and becoming opaque and brown, and the flat top assumes the appearance of a dark brown scab; the poc then bursts, and a little matter exudes, which hardens, scabs, and falls off; and as the whole eventually desquamates, the skin is left covered with bright patches. The maturating process is always attended with a swelling, more or less severe, of the whole body, particularly of the face and head, the eyes being often closed, and the whole head, in severe cases, enormously enlarged, in which case there is generally delirium, with oppression at the chest and difficulty of breathing. Such are the general features of the distinct or benign form of the disease.

The confluent variety is marked by the symptoms commencing sooner after infection; the eruptive stage being more intense, the rash thicker, more numerous, and universal, the secondary stage or secondary fever—the period of maturation—more violent, the swelling more extensive, often obliterating every recognizable feature of the countenance; and sometimes the lungs and the *pleura* are involved in the inflammatory action of the skin, while, to add to the gravity of the case, the fever often assumes a typhoid character.

There are *two symptoms* in small-pox which will generally serve to indicate the nature of the disease—the excessive heat of the skin, especially in the first and second stages, and the vomiting, one of the first and often one of the last symptoms.

The unfavourable symptoms are a sudden disappearance of the eruption, a subsidence of the swelling of the face, suppression of the saliva, great prostration, and sudden pallor of the skin. The crisis of the secondary fever is accompanied with diarrhœa or a sediment in the water.

Small-pox is most dangerous to adults and pregnant women, often proving fatal to the latter.

Salivation not unfrequently attends small-pox, and there is *always* a very considerable amount of saliva, with a brown, dry, and furred tongue: this fact as regards the tongue should be borne in mind, lest it should be mistaken for a typhoid symptom.

The **TREATMENT** of small-pox is different in each stage of the disease. In the first, or the stage prior to the eruption, means must be taken to moderate the fever without prostrating the strength; and though in some plethoric habits bleeding is sometimes requisite, as a general rule it is a practice fraught with danger, saline purgatives forming, with cooling mixtures, the best remedies. On account of the great heat of the skin, some physicians object to diaphoretics in this disease; the objection, however, is often a mere prejudice. As soon as the eruption is fairly out, and while the vesicles are forming, the *patient's head must be shaved;* this is indispensable, and even more necessary with females than males. In the second stage, or while the maturation is taking place, the saline and febrile treatment is to be continued, especially while the pulse is quick and full; should the pulse change, however, and become small, quick, and feeble, with cold extremities and a purple appearance of the eruption, a typhoid character is indicated, and the system is then to be supported by wine and other stimulants. When the eyelids are very much swollen or inflamed, a blister behind the ears is often of great service; and when the throat is greatly affected, as is sometimes the case, a blister there is also of decided benefit; while to relieve the head, the lungs, or some other organ, a hot foot-bath, mustard plasters, and blisters to the legs or spine are frequently of importance during this stage of the disease. When inflammation of the lungs or the pleura supervenes, calomel and opium are to be given for a few times, and the calomel afterwards carried off by a dose of castor oil, as being less exhausting than saline purgatives. In the third stage, should debility set in, recourse must be had to quinine and tonics generally, and when erysipelas of the head and face shows itself, it must not be treated as an inflammatory disease, but met at once with nourishment, stimulants, and change of air. The treatment should commence by giving an emetic of 15 grains of ipecacuanha for an adult, to be followed in two or three hours by the annexed saline aperient. Take of—

Sulphate of magnesia	1 ounce.
Sulphate of soda	1 ounce.
Tartar emetic	1½ grain.
Mint water	12 ounces.

Mix: a wineglassful to be given every four hours till it acts freely. During the whole illness the patient must be kept in a large, cool, well-ventilated room, with as few articles of furniture as possible, upon a very low, unexciting diet, with plenty of cool drinks, with which he is repeatedly to quench his thirst; the bed at the same time must be deprived of all the blankets, and only sufficient clothing left to cover the body and prevent the patient from taking cold. If excessive action on the bowels takes place, it must be gradually checked by aromatic confection and chalk mixture, or by half a teaspoonful of tincture of kino in a little water. For the secondary fever during the maturating process the following mixture is to be given, and once a day a couple of tablespoonfuls of the saline purgative mixture. Take of—

Powdered nitre	1 scruple.
Camphor water	5½ ounces.
Antimonial wine	3 drachms.
Spirits of mindererus	2 ounces.
Spirits of sweet nitre	3 drachms.

Mix, and make an 8-ounce mixture: two tablespoonfuls to be given every four hours, or one tablespoonful every two hours. When the swelling of the head is very considerable, much relief and great comfort is experienced by occasionally sponging the face and eyelids with cold water, or tepid water, or water and vinegar. To check the vomiting, which proves so distressing a symptom in this disease, effervescing powders may be taken two or three times a day, irrespective of all other medicines: for this purpose, 20 grains of the bicarbonate of potass, or the same of carbonate of soda, dissolved in 4 ounces of water, and 15 grains of tartaric or 20 grains of citric acid, dissolved in the same quantity of water, may either be mixed and drunk while effervescing, or the mixtures may be taken separately, and the effervescence left to take place in the stomach. When necessary, 5 drops of laudanum may be added to the saline portion of the draught on each occasion. If there is any indication of *pleuritis*, or serious affection of the organs of the chest or throat, towards the end of the second stage, one of the following powders should be given every three hours for four or five times, to be then followed by a dose of castor oil.

Take of—

Calomel	6 grains.
Powdered kino	12 grains.
Powdered opium	3 grains.

Mix, and divide into six powders.

During the last stage of the disease the treatment must depend greatly on the symptoms and condition of the patient at the time. The main object of the medical man now is to carry his patient safely over the critical period of desquamation, and restore the body to its former energy. For this purpose, the diet, composed of beef-tea, puddings, and farinaceous foods, must be gradually increased in its strengthening properties, with stimulants, if necessary, quinine, tonics, change of air, and exercise. The room of the invalid should be frequently purified with chloride of lime, or by sprinkling the floor with vinegar and water. See Sick-room. About the beginning of the eighteenth century Lady Mary Wortley Montagu first introduced into this country the practice of inoculation, a prophylactic remedy which she had seen Arabs or some of the mountain tribes of Syria adopting with good effect on all patients suffering from this, at that time an Asiatic scourge. About seventy years later, in 1796, Dr. Jenner, after devoting the best part of his life to the testing of his new principle, made known to the world the benefits of his discovery of Vaccination, by which the lymph from a corresponding disease in a cow was introduced into a healthy person, instead of, as in inoculation, using the virus from a diseased body for the same purpose—that of producing a *milder* form of the malady in a constitution not previously *weakened* by premonitory symptoms. See Inoculation, Vaccination, and Cow Pox. One of the most dreaded consequences of small-pox has always been the serious disfigurement that in all severe cases follows this disease, particularly as it affects the countenance, every poc being succeeded by a corresponding pit or cavity under the skin, and when, as in confluent small-pox, many pocs have run together, leaving deep seams and unsightly scars. The cause of this disfigurement is the suppuration that takes place in the process of maturation, the inflammation affecting the adipose tissue below the cuticle, and causing each little portion beneath the vesicles to suppurate, and thereby producing a waste in the tissue. Many methods have been adopted by medical men to arrest this process, and to save the face from the ravages of the disease: for this purpose masks have been made, and the face covered with a solution of *gutta percha* or collodion, but not always with *benefit.* Others, again, have punctured every pustule as soon as the first transparent lymph was formed, and, allowing the fluid to escape, have thereby arrested the inflammation; this process, however, is very tedious, and there is a risk of exciting the vessels of the part, and increasing the heat and inflammation of the face. The best and most effectual mode of treating the pocs, and preventing *pitting*, is, as every vesicle becomes full of transparent fluid, to touch the top of each with a camel-hair pencil wetted in a weak solution of lunar caustic; this, acting as a counter-irritant, causes the partial absorption of the lymph, and arrests the inflammation; the vesicle becomes black, and when the desquamation takes place, leaves the face smooth, and only for a time discoloured by the red marks of the bases of the pocs.

Lotion to prevent the Pitting of Small-pox.—Take of—

Lunar caustic	2 grains.
Cold boiled water . .	1 ounce.

Dissolve: to be applied with a brush.

Acid fruits, lemonade, barley water, or balm tea are the usual fruits and beverages prescribed in this disease, and should be freely administered to the patient, whose person must at the same time be kept perfectly clean, and his room always cool, pure, and well-ventilated.

SMELL.—One of the five senses; the appreciation of the effect produced on the extremities of the olfactory nerve by the particles of odour falling on them. See Touch.

SMOKING.—This vice—for, carried to the extent it now is, it is truly one—in which even boys indulge with the freedom and abandonment of men, is an evil that cannot be too severely reprobated, for it must be evident to the dullest comprehension that the constant absorption, however minute the quantity, of the fumes of a deadly drug, cannot be daily persisted in without injury to the system. A pipe of tobacco, or a cigar, once or twice a day, if it causes no salivation, or the smoker abstains from expectoration, may possibly be indulged in with impunity; but where the salivary glands are greatly excited, and the person accustoms himself to expectorate while smoking, the practice must be regarded as extremely objectionable and dangerous. The system, in the first place, is deprived of a large amount of the natural solvent of the food; digestion is greatly impaired in consequence; less chyle extracted from the aliment taken, and the blood impoverished by receiving less than its due proportion of healthy nutriment. Hollow cheeks, an emaciated body, impaired digestion, a languid appetite, and a listless state of mind, are the certain consequences resulting from an over indulgence in the practice of smoking, accompanied with excessive expectoration. Smokers should in all cases avoid using short or dirty pipes, as the rank oil given off from the burning tobacco, by irritating cracks or sores on the lips, very often induces a *scirrhus* or cancer of the lower lip; besides this danger, such a custon taints the breath most offensively. See TOBACCO.

SNEEZING is a convulsive action of the muscles of the mouth and nose, caused by some irritation applied to the extremities of the olfactory nerve, by which a branch of the fifth pair, also stimulated by the same cause, induces that spasmodic action known as sneezing, whereby the nerves are relieved of the cause of irritation, the particles of snuff or dust being violently thrown off, or washed away by the discharge of mucus that always succeeds. Sneezing is also a symptom of cold in the head, and shows either a congestion of the lining membrane of the nose, or a dry, irritable state of the part.

SNOW BLINDNESS.—A peculiar affection of the optic nerve, resulting in a more or less complete blindness, caused by the glare of light from snow in Siberia, Greenland, and other northern countries. To guard against this injury to the vision, the Laps and Esquimaux use a kind of wooden shield for the eyes, with at hin slit in the centre of each shield. These snow-eyes, as they are called, are worn like ordinary spectacles, and besides protecting the sight, enable the person to see objects at a great distance.

SNUFF is sometimes a very useful agent in some nervous affections of the head, and as a stimulant in cases of chronic thickening of the Schneiderian membrane; in both cases snuff effects its benefit by producing a discharge from the vessels of the nose and head, and by that action relieves them of their excess of blood.

Snuffs belong to the class of errhines, of which tobacco dried and powdered is the most universal. Many herbs, dried and reduced to an impalpable powder, are used, under the name of cephalic snuff, for nervous headaches, sore eyes, and other affections. When taken in excess, snuff is apt to derange the state of the stomach, interrupt digestion, and produce nervous relaxation and debility; this is particularly the case with the damp snuffs. Heavy scented snuffs, such as the "Prince's mixture," should be avoided, as all such are likly to produce headache. The purest of all tobacco-snuffs is the high dried article known as "Lundy-foot" or Irish.

SOAP.—This familiar household necessary, and sanitary agent, is made with oil or grease and soda. The purest of all the soaps is the Castile, or Spanish soap, of a mottled brown and white colour, prepared with olive oil and barilla or soda: this is the article so frequently used in the manufacture of pills; partly so employed to facilitate their solution in the stomach, and partly to act on the kidneys as a diuretic, soap being thought to operate in that manner on the system.

The best white soap is either made with tallow and soda, or oil and grease with alkali. The yellow soap is made of the same materials, with rosin. Soft soap, used for cleansing purposes, is the commonest of the soaps manufactured, and usually made with train or fish oil and potass. There is yet another soap, used on shipboard to neutralize the hardness of salt water, and called marine soap, a certain amount of which is supplied to, or should form part of the stores of all emigrants. Besides being frequently prescribed in the making up of pills, soap is employed in making the simple and compound liniments of soap—opodeldoc,—the soap plaster used for bed-sores, and it also enters into the composition of the compound sulphur ointment.

SOAP LINIMENT, sometimes called compound tincture of soap, and generally known as "opodeldoc," is an extremely useful embrocation in cases of sprains, rheumatism, or other affections; and when combined with laudanum, makes an admirable external application, especially where there is much pain present.

SODA.—One of the fixed alkalies, obtained from sea-water and all marine plants, and those growing near to the sea-shore. Soda is also found native in seams in the sand, or as a crust on the surface of the earth: in the latter condition it is usually in the state of an impure carbonate, called natron, or kelp. The Spaniards call the ashes obtained from burning the marine plants barilla.

MEDICAL PROPERTIES AND PREPARATIONS.

Soda acts on the system as an anti-acid, diuretic, diaphoretic, and either alone or in combination with other articles, is employed with great benefit in certain conditions of the kidneys and bladder, in gout, rheumatism, dyspepsia, heartburn, flatulence, &c.

Like potass, soda unites with most of the mineral and vegetable acids, forming compounds of a highly useful and medicinal character; the most common and beneficial of all these preparations, however, are the

Carbonates, or compounds of carbonic acid gas and soda. Of these there are three varieties:—1st. Sub-carbonate; 2nd. Carbonate; and 3rd. Bicarbonate.

1st. The *sub-carbonate,* generally known under the names of the impure carbonate, natron, barilla, or kelp, and used only in the arts, particularly to make glass and soap. 2nd. The *carbonate.* This preparation is seldom used medicinally except when its water of crystallization is driven off by heat, when it is employed, with columbo and rhubarb, as the dried carbonate, in cases of indigestion as a stomachic tonic. Dissolved in water, and treated with quicklime, the carbonate is employed in pharmacy to make the caustic solution of soda, known as the *liquor sodæ,* which is employed as an antilithic for stone or gravel, in doses of from 10 to 20 drops in water or milk. 3rd. *Bicarbonate* of soda. This is the article universally known as the carbonate of soda, used in effervescing draughts, and in cases of acidity of the stomach, and may be given in doses varying from 10 grains to 60 grains, two or three times a day.

Sulphates.—These are salts composed of sulphuric acid and soda, and of which the Pharmacopœia contains two preparations:—1st. The sulphate, or *sulphas sodæ,* commonly known as Glauber salts, and which before the introduction of Epsom salts, were universally used as a purgative medicine. The dose is from 4 drachms to 1 ounce for an adult. 2nd. The *bisulphate,* used both as a diuretic and a purgative: in the former case it is given in doses of from 20 to 40 grains, and in the latter from 3 to 6 drachms, for an adult.

Phosphate.—This preparation of phosphoric acid and soda is procured by mixing a solution of phosphate of lime with another of carbonate of soda. Phosphate of soda, known as tasteless salts, is chiefly used as a mild purgative, and being free from the nauseous taste common to most *saline* purgatives, can be given in milk or *broth.* The full adult dose is from 1 ounce to 1½ ounces, and for ricketty children under ten years of age, from 1 to 2 drachms may be given daily as a mild aperient.

Muriate and Chloride.—This preparation, composed of chlorine and sodium, or as formerly supposed, muriatic acid and soda, is known indifferently as the muriate of soda or chloride of sodium, or in common language as common salt. This chloride of sodium is only used in medicine as an emetic in cases of emergency.

Soda also unites with vinegar and the citric and tartaric acids, forming an *acetate, citrate,* and *tartrate* of soda, used principally as diuretics and aperients: the dose, as a diuretic, of each being from 15 to 30 grains, and as an aperient from 2 to 5 drachms. The acetate and citrate are also given with the carbonate of soda or potass, as effervescing draughts. The tartrate of soda, combined with the tartrate of potass, constitutes the article known as Rochelle salts.

There are a few other preparations of soda, such as the *borate of soda* (see Borax); but they are all of minor importance.

SODA WATER.—This well-known effervescing beverage is a mere weak solution of bicarbonate of soda, into which, by means of a powerful pump, carbonic acid gas is forced till the liquid is highly charged with the gas; it is then bottled, corked, and wired, to prevent the escape of the carbonic acid. Each tumblerful of soda water contains about a scruple of carbonate of soda, the water is consequently slightly anti-acid, and in some cases of fever becomes a refreshing and cooling drink. In the nausea and sickness of a biliary attack, and in cases of sea-sickness, half a tumblerful of soda water, with a few teaspoonfuls of brandy, or half a glass of Madeira, will be found in many instances most effectual in allaying the sinking and exhaustion consequent on the retching.

SODIUM.—The metallic base of the alkali soda. See Potassium.

SOFTENING OF THE BRAIN.—This peculiar condition of the cerebrum, the result of some injury to the organ from blows, falls, pressure, or morbid action, is denominated by the French *ramollissement,* and is sooner or later followed by loss of memory, paralysis, or fatuity. Other organs are also subject to a like action, by which the texture of the part is deteriorated in the same manner.

SOLÆUS.—A muscle of the calf of the leg inserted into the bone of the heel (*os calcis*), whose function is to extend the foot.

SOLANIM.—The active principle of the bitter-sweet, *Solanum dulcamara*.

SOLAR PLEXUS.—A congeries or web of nerves, arising from a series of ganglia distributed along the course of the aorta.

SOLIDS.—The firm and fixed portion of the human body, which by physiologists is said to consist of two parts, solids and fluids; the proportion of the latter being more than two-thirds greater than that of the former; thus a man's body, weighing 154 pounds, if completely dried so as to drive off all the fluids, will only weigh, after the drying is complete, forty-three pounds.

In some of the lower animals, the proportion of the fluids over the solids is still greater: a jelly fish that weighed two pounds, after a perfect desiccation in the sun, weighed only *sixteen grains;* thus showing that *two pounds* of water had been organized by *sixteen grains* of solid matter.

SOLVENT, among chemists, is any menstruum or corrosive liquid which will dissolve bodies.

SOMNAMBULISM, OR SLEEP-WALKING.—A species of clairvoyance, or mesmeric sleep, in which certain portions of the brain and spinal marrow are in a state of profound repose, and others in a state of wakeful vigilance. Whatever may be the true cause of somnambulism, the fact itself indicates an unhealthy state of the system, in which the nerves are primarily affected. Somnambulism is often found occurring in children of either sex, but usually subsiding on their reaching the age of puberty. The sagacity displayed by persons in a state of sleep-walking is often most wonderful; in all cases, however, care must be taken that the person is not suddenly or rudely roused from his walking slumbers, as great danger might, and sometimes does, accrue from such a line of conduct. See TRANCE.

SOPORIFICS.—Any medicines which will produce sleep; another term for hypnotics and narcotics.

SORBIC ACID.—An acid obtained from the wild cherry, or fruit of the mountain ash. An acid identical with that of apples, malic acid.

SORDES.—A medical term for the fur and corruption given off from foul sores and ulcers, particularly of the mouth.

SORE MOUTH.—Children, especially of the poor, the ill fed, and neglected, are those most frequently attacked with ulcerated, or as it is called, sore mouth, which sometimes begins even during dentition, but more frequently between six and ten years of age. This disease usually attacks the gums, tongue, and checks, the whole mouth appearing of a dull red colour; the bowels are generally confined, the appetite uncertain, the breath offensive, and not unfrequently the glands of the neck are enlarged and indurated, as in mumps.

The TREATMENT consists of grey powder and rhubarb, as an alterative; farinaceous food and eggs, with beef-tea, thickened; and washing the mouth twice a day with a lotion made by dissolving 1 drachm of chlorate of potass in 2 ounces of cold water, or with a weak solution of chloride of lime.

SORE THROAT.—There are many varieties of sore throat: the malignant sore throat, so often an attendant of scarlet fever, we have already referred to; inflammatory sore throat, involving the organs of voice, will be dealt with under the article Throat. The affection we purpose considering under this head is that form of the disease consequent on sudden cold, attended with relaxed *fauces* and *uvula*. Very often sore throats of this character seem to arise all at once, with heat and dryness of the part, slight chills or shiverings, dufficulty of swallowing, increased towards night, and sometimes headache.

The TREATMENT with a person of robust health, or one liable to inflammatory diseases, is to give an emetic in the first instance, put a hot bran poultice round the throat, keep the patient confined to a room with one uniform temperature, refuse all animal food and stimulants, and confine him to gruel or tea and dry toast; put his feet in hot water, and order 10 grains of Dover's powder on going to bed, with a piece of sal prunella in his mouth, and teach him to endeavour, by extra clothing, to encourage free perspiration. If there is weight and tightness on the chest, either the throat and thorax should be rubbed with hartshorn and oil, and a hot bran poultice placed over the wet parts, or a mustard and flour poultice may be used instead of the hartshorn and oil. If there is much cough, or if it is hard and dry, the following may be given every four or six hours.

Take of—

Powdered nitre . . .	2 scruples.
Camphor water . . .	4 ounces.
Antimonial wine . .	4 drachms.
Spirits of mindererus .	1½ ounce.
Spirits of sweet nitre .	2 drachms.

Mix. Two tablespoonfuls to be taken for a dose.

If the relaxation of the uvula continues, a gargle of sage tea, with alum, must be used during the day, and the hot water, poultice, and other means, repeated at bedtime. For the sore throat that accompanies influenza, the foot-bath, bran poultice for the neck, and half a pint of egg-flip, with a piece of sal prunella for the mouth, should be adopted each night before going to bed.

SORREL.—A pleasant, sharp herb, chiefly used for the purpose of extracting the *sal acetosella*, or salts of lemon.

SOUJEE.—A granular preparation of wheat, resembling semolina, or manna croup, used for a farinaceous food.

SOUND.—The name of a surgical instrument, sometimes called a staff. A sort of steel bougie, with a groove along one side. The sound is used to feel for the stone previous to operating for its removal.

SOUND.—A term in auscultation. See STETHOSCOPE.

SOUP.—Though the culinary preparations generally known under this name are seldom admissible for the invalid or person of weak digestion, they nevertheless become very excellent articles of diet for children and those blessed with strong and active stomachs, and particularly valuable when properly thickened with sago, tapioca, or any other farinaceous article, as a wholesome food.

For the benefit of such of our readers as it may concern, and for those who believe that soup cannot be made without a large quantity of meat and many expensive articles, we subjoin M. Soyer's receipt for making two gallons of excellent soup for 7d., the same as that manufactured for the troops in the Crimea:—2 ounces of dripping; quarter of a pound of solid meat at 4d. per pound, cut into dice one inch square; quarter of a pound of onions, sliced thin; quarter of a pound of turnips (the peel will do), or one whole one cut into small dice; two ounces of leeks (the green tops will do) sliced thin; 3 ounces of celery; three quarters of a pound of flour; half a pound of pearl barley, or 1 pound of Scotch; 3 ounces of salt; quarter of an ounce of brown sugar; 2 gallons of water.

DIRECTIONS.—The two ounces of *dripping* are first put into a saucepan capable of holding two gallons of water, with the meat cut as directed, and two onions peeled and sliced. These are to be fried for a few minutes in the saucepan over a coal fire. The other vegetables are then introduced, and stirred over the fire for ten minutes; then one quart of cold water, and three quarters of a pound of common flour and the pearl barley are added, after mixing which well together, the rest of the water and the other ingredients are to be put in, and the whole allowed to simmer for three hours, by which time it is fit for use.

Liebig's soup, so strongly recommended as of such great service in cases of debility, is made by pouring on finely-chopped meat an equal weight of water, then slowly and gradually heating both up to the boiling point, at which they are to be kept for a few minutes, and lastly strained and pressed, when it becomes a strong, fine-flavoured soup, containing all the juices and nutriment of the meat.

SOUP, PORTABLE.—This article, sold in cakes, only requires boiling water poured upon it, with a little salt and pepper, to make an excellent soup, which has the advantage of keeping for any length of time.

TO MAKE PORTABLE SOUP.—Take of calves' feet, two pounds; mutton, five pounds; pork, one pound; water, a sufficiency to cover them well. Boil these with a little salt, two carrots, two stems of celery, and one shalot or onion; the whole minced finely. Towards the end suspend a clove bag in the liquor. Remove the meats, and express them through a sieve or cloth, evaporate the fluid freed from water in a water bath to the consistency of honey, and pour it upon a clean, smooth stone; finally, cut it into pieces, when cold, and dry it.

SOWENS.—A light, sub-acid kind of flummery, made in Scotland from the bran or husk of the oatmeal while undergoing the process of acetous fermentation. An excellent, light, and nourishing food in fevers, and for convalescents from inflammatory diseases.

SPA.—A mineral spring. We shall defer the consideration of the foregoing, and home spas, till we come to the article Water, which see.

SPANISH FLY, OR BLISTERING FLY (the *Cantharis Vesicatoria*).—This insect, the blister beetle, is a native of the south of Europe, but obtained more particularly from the Peninsula. The Spanish fly is esteemed medicinally on account of its stimulating, rubefacient, and blistering properties, and is kept in the form of a powder; a tincture, vinegar, and plaster, and though sometimes given internally in some affections of the bladder and kidneys, it is as an external application, to stimulate, inflame, or blister, that it is most frequently employed. The dose of the tincture, the only preparation given internally, is from 10 to 30 drops. From its proneness to produce strangury, this drug must be given with great caution, and even when applied as a blister, the patient should drink freely of linseed tea or barley water, to counteract its probable effect on the bladder. See CANTHARIDES, and BLISTER.

SPASM.—A sudden and irregular contraction of the fibres of one or more muscles. Spasm is generally divided into tonic and clonic spasm. When the spasm or contraction affects the same set of muscles for a certain time, and produces a fixed or rigid state of the parts, it is called TONIC spasm; of such, tetanus, hydrophobia, and catalepsy are examples. When the muscles are alternately contracted and relaxed, the spasm is called CLONIC, of which chorea, hysteria, and epilepsy are instances.

The TREATMENT of spasm must depend greatly on the part affected, and the severity of the attack; in general, heat (the hot bath); depletion (bleeding); and narcotics (opium), are the remedies on which the greatest reliance can be placed. See CONVULSIONS, and the above diseases.

SPATULA.—A supple blade, a palette knife, according to the size, used for mixing powders, making ointments, &c. A plaster spatula is a small iron used to spread plasters.

SPEARMINT.—The *Mentha viridis*. See MINT, SPEAR.

SPECIFIC, A.—By this word is understood a particular virtue resident in some drug to cure a certain disease, such as quinine in intermittent fever. Specific gravity is a term used by chemists to denote the special relative weight of any body tested by the weight of water, which, for that purpose, has been assumed to stand at 1,000.

SPECIFIC BLOOD DISEASES.—The diseases which fall under this head are all of short duration, the patient either dying or recovering within a limited time; They are all infectious, and in all the blood is seriously and primarily diseased. Of these, typhus, yellow fever, intermittent fever, small-pox, and cholera, are most important.

SPECTACLES.—These most necessary aids to impaired or defective vision are made of different kinds of glass, of various shapes, and of several colours, so as to suit the defects of a long or a short sighted vision, the loss of the crystalline lens, and to guard against the influence of strong light falling on the retina. In the selection of spectacles the individual must depend upon the optician, and the test of his personal inspection. The short-sighted person requires a *concave* pair of glasses, to overcome the too convex state of the cornea; the long-sighted requires *convex* glasses, for the opposite reason. It is only necessary for us to observe here, that in buying glasses the person should be careful to begin with those of the lowest power, and which, in the first degree, merely correct the error of the eye, and be careful *not to commence* with a strong magnifying power, but so arrange as to ascend from the glasses that restore to his mind a natural appreciation of objects by degrees, and, as it is required, to a higher and higher power. In either case, of long or short vision, the same rule holds good.

For him who has lost one lens by an operation for cataract, the spectacles require to be made differently; one glass must be made to supply the defect of the lost focus, the other to suit the healthy eye. As most persons requiring spectacles are unable to appreciate the mathematical labour and accuracy of grinding glasses into segments of circles, or understand how the deviation of a line would destroy the accuracy of a glass, we have only to repeat that all persons requiring such appliances must go to the optician, and try on glasses till they obtain a pair to suit them; in that respect their medical man can afford them no guide or assistance, the convexity of the globe of the eye in one instance, and its concavity in the other, having to be overcome by appropriate glasses.

SPECULUM.—A looking glass. A surgical application which has the property of dilating the part to which it is applied, and, by means of a reflecting glass, exposing the nature of the disease which lies beyond the reach of the naked eye. The speculum is chiefly used in cases of disease of the neck, of the uterus, and the vagina itself. See WOMB, DISEASES OF.

SPERMA.—The secretion proper to the spermatic vessels of the male; in other words, the seminal fluid.

SPERMACETI.—The concrete oil obtained from the head of the sperm whale, or the *physeter macrocephalus*. Spermaceti, combined with olive oil and white wax, or almond oil and white wax, forms either the cerate known as simple or white ointment, or, differently prepared, cold cream. It also enters into the composition of lip-salve and other compounds, and is sometimes given in emulsions in cases of colds. See Cetaceum.

SPERMATIC CORD.—The name given by anatomists to the artery, vein, nerve, and lymphatic vessel, which, bound together in one sheath, like the *funis* or umbilical cord of the fœtus, runs from the loins in the male into the bag of the *scrotum*, where it becomes wonderfully attenuated and elongated, and for the better disposition and the compacter arrangement of the many thousands of yards into which the cord is extended, it is folded or rather rolled up, not unlike the thread of a ball of cotton. For the further anatomy of this organ, see Testis.

SPERMATORRHŒA.—A discharge of seminal fluid, commonly called seminal weakness or debility. It is only of late years that the true nature of this disease has been properly understood, many of the most serious cases having been regarded as and treated for *gonorrhœa*, which, though indeed the proper name of the disease, is a term now confined to an unhealthy discharge from the lining membrane of the *urethra*, a discharge which, when long standing and chronic, becomes a gleet, and is *always the result of infection*. Spermatorrhœa, on the contrary, proceeds from an injury inflicted on the organs of reproduction, and consists of a discharge from the spermatic and seminal vessels, and may be entirely, and in many cases is, completely irrespective of all venereal taint.

Spermatorrhœa is a disease that could hardly, by any possibility, arise in a natural way; no organic affection of the part, no amount of debility, or complication of accident or disease, indeed, could produce what is called seminal emission, did not the patient, by incontinence or vice, provoke the cause, and engender the disease himself. Many men are so inordinate in their passions, that in time they amount to a mental disease, such as we have already characterized under the name of *satyriasis*, an intemperance which, if given way to, so debilitates their bodies and paralyses the seminal organs, that whether unduly excited or in a state of temporary rest, they are kept in a condition of constant irritation and involuntary excitation; thus, whether sleeping or waking, often from the most trivial contact, indeed from the mere force of the imagination alone, those debilitating emissions, which constitute the most important feature of this disease, are repeatedly taking place. But though incontinence in youth is often the cause of spermatorrhœa, the disorganization of the spermatic system, and the ruin of connubial happiness, it is unfortunately to the vice of self-pollution, that moral offence known as onanism, that we must in general attribute that moral prostration and physical incapacity now so widespread among the youth of the present generation, and of which the disease we are at present considering is only one of the lamentable evidences.

We had intended to devote a space of this work to the injury inflicted on the reproductive organs by the inconsiderate folly of youth, but for reasons which will be readily understood by all who remember the strictly domestic nature of this work, we have deemed it best to embody the pith of what we might have said on such a subject in this place, as being more pertinent to the theme, and at the same time keeping the pages of the Dictionary generally free from what, to many, might be thought objectionable matter. Of the moral unhappiness and physical misery resulting from the vice of self-abuse, few think at all, or, if they do, regard what they hear as bugbears, or evils only problematical when compared to present enjoyment. As a few practical truths will go farther in illustrating our point, and showing the evils we have alluded to, than a page of wholesome counsel, we beg those of our readers who may consult this article to remember, that every emission unnaturally produced *consumes between 6 and 8 ounces of blood*, or, in other words, that that amount of arterial blood is required to eliminate the seminal fluid *lost at one emission*. If it is further remembered that there are only 30 pints—old measure—of blood in the adult body, and that the amount of chyle, or new blood, does not exceed twelve ounces a day, it will be easily understood, on the commonest principles of arithmetic, how fatal to the stamina of the body must be two, three, or more such emissions in the day. So great is the reproducing power in youth up to a certain age, that this drain may be borne with apparent impunity for some time, but sooner or later it is *certain* to show its influence on the system; for it is an established fact, hat *no law of nature can be abused* ithout entailing a *fearful penalty*. In his case it is emaciation, weakness, loss f appetite, dimness of sight, pains in the ack and head, hot and feverish sleep, isturbing dreams, loss of memory, and oo often a total prostration of the mental nd physical powers. To render this ubject, and what we have yet to say pon it, more intelligible, the following bstract of the physiology of the organs n question will be found both interesting nd useful:—The spermatic cord brings rom the aorta a stream of arterial blood o the organ enclosed in the scrotum, and nown as the testicle; or rather, when the ord reaches the bag of the scrotum, it nstantly diminishes in calibre, and ecomes as thin as the finest thread, and f several hundred yards in length. For he closer and more convenient disposal of his immense length of vessel, nature has ound it up like a ball of cotton, in which hape, under the name of a testicle, it angs at the end of the spermatic cord; rom the opposite extremity of this ball r *testis* a vessel rises, called the *vas eferens*, which, running under the ladder, receives a duct from a small land, the *vesicula seminalis*, and then, ntering the prostrate gland, is joined by ts fellow of the opposite side, when it eceives the name of the *ejactatory duct*, hich finally terminates in the bulb of the rethra. The blood brought by the permatic cord to the testicle is in that rgan converted into seminal fluid, and arried by the vas deferens to the urethra, eceiving on the way a vitalizing fluid rom the seminal gland; it will now be nderstood, that as the excitement is iven, the *semen* passes at once along the as deferens, and into the ejactatory duct, hich propels it into the urethra at the roper moment. See BLADDER, *cut of*. he physical consequence of the abuse of hese organs is, after a time, a total deterioration of the seminal fluid, which, nstead of the proper consistency, becomes hin and watery; the vitality, on which all potency depends, appears entirely gone, or it has no longer the power to produce natural erection, and, as a germinating luid, is absolutely sterile. Though nable, however, to perform their healthy ecretion, the spermatic organs, under the timulus of a constant and irritating excitement, form a thin, watery secretion, hich either runs away from the urethra ike a gleet, or is discharged by involuntary missions. The scrotum, instead of being rough, firm, and contracted, and the testicle within feeling hard and compact, is flabby, relaxed, and pendulous, and often thrice its natural length; while the spermatic cord, greatly attenuated, is terminated at the bottom of the lengthened scrotum by a soft, oblong mass, that we can only believe to be the testicle by its relative situation. The moral consequences of this diseased state are often more distressing than the physical; the mind, too, sooner or later, becomes affected, a trembling palsy keeps the head and hands in constant tremor, while a tenacious saliva, in severe cases, drivels from the mouth; and should the patient think by marriage to effect a physical cure, and break through an evil habit, the experiment is certain to end in misfortune and unhappiness; nervous anxiety will render all intercourse a failure, thereby embittering not only his own life, but that of another, for in such a case there can be neither sorrow nor pity, but only contempt. As we have said enough on this subject to lead any one capable of reflection to contemplate the fatuity of mind, bodily prostration, and life of misery that must follow a continuance of such practices as those which have induced such a train of consequences, we shall now proceed to show by what TREATMENT spermatorrhœa, and the impotency which sooner or later follows it, may be cured. In the first place, it is a *sine qua non* that the patient should abstain from all the habits and practices which have brought on the disease, and instead of daily robbing his body of large quantities of blood, he should endeavour, by an altered life, to add to the quantity and quality of that vital fluid. In the directions given for food and exercise, the patient should be punctual and regular, as the cure depends as much on the observance of the following rules as on the medicines to be taken:—First, then, the patient should go to bed at ten o'clock, and be careful to put no more clothes on the bed than are actually necessary; he should rise at seven in the morning, and the instant he wakes *get out of bed*, and having over night prepared a hip bath of cold salt water, seat himself in it, using a towel or a flesh brush to rub the water well into his hips, back, and thighs; after five minutes so spent, he must rub himself thoroughly dry with a rough towel, then dress, and proceed to take an hour's brisk walk. Those who cannot obtain a bath should use a sponge and cold vinegar and water, or salt and water. The breakfast should be taken at eight o'clock, the dinner at one, tea at six, and supper at nine o'clock; and to insure sleep on going to bed, prevent dreams, and the hectic flushes and irritating desires which at first may arise, he should take 20 drops of laudanum, or 30 drops of the liquor of the acetate of morphia, half an hour before going to bed. After the first few weeks, and when the system begins to feel the benefit of the altered treatment, the sedative may be easily broken off by reducing the quantity taken by two or three drops every night. Once a week the patient should take a shower bath in the evening, *in addition* to the daily hip bath or sponging. The mind is to be kept constantly employed, either by some mechanical employment, or by reading, care being taken that the matter read shall be of a healthy and moral tone; the patient must also avoid heated rooms, theatres, all places of amusement, and, as far as possible, female society, and never allow his hands or his mind to be unemployed. Exercise by walking, rowing, or the dumb bells, according to the strength of the patient, should be adopted between each meal as far as is possible. The diet must be light but nutritious, with a due proportion of animal and vegetable food at every dinner; wine and spirits should be strictly excluded, except in cases of great debility, but stout may be advantageously taken at least twice a day; those who can neither take stout nor porter may substitute copious draughts of new milk for their beverage. The bowels are to be kept open by an occasional compound colocynth pill, or a dose of castor oil, but *only* occasionally. In severe cases, the lower portion of the spine should be well rubbed with a stimulating liniment; and one of Pulvermacher's electro-galvanic belts worn for an hour or two daily round the hips, and under each testicle. The internal remedies are almost secondary to those means just enumerated; but where the appetite is faulty, the following powders should be taken till the stomach is able to accept and digest the food given to it.

Take of—

Dried carbonate of potass	1 drachm.
Powdered ginger . . .	36 grains.
Powdered colombo . .	48 grains.
Powdered rhubarb . .	24 grains.

Mix, and divide into 12 powders. One to be taken, in a little water, an hour before breakfast, dinner, and tea. When the *stomach* has been brought back to its healthy function by the powders, or before, if the digestion is good, the following are to be given, each for three days consecutively.

No. 1. Take of—

Colombo root	1 drachm.
Cascarilla	1 drachm.

Bruise, and infuse in—

Boiling water	10 ounces.

Strain when cold, and add—

Quinine	1 drachm.
Diluted sulphuric acid .	60 drops.

Mix, one tablespoonful to be taken every six hours.

No. 2. Take of—

Quassia raspings. . .	1 drachm.
Orange peel	3 drachms.

Infuse in—

Boiling water	10 ounces.

Strain, and add—

Tincture of the muriate of iron	2 drachms.

Mix. A tablespoonful every six hours.

No. 3. Take of—

Precipitated carbonate of iron	2 drachms.
Carbonate of soda . .	1 drachm.
Ginger powder . . .	1 scruple.

Mix, and divide into 12 powders. One to be taken every six hours. The chalybeate waters of Tunbridge Wells, and the saline springs of Bath and Harrogate, may be taken in succession by the patient, when the system has begun to react, and he can afford, if only for a few days, to take advantage of the benefit of each, as towards the end of the cure they will prove highly advantageous.

In concluding this subject, we would beg all of our readers who consult this article to banish the idea that there is any balsam, whether of Gilead or of Mecca, that possesses any power that can afford the slightest benefit in such cases as those of which we have just treated; and at the same time we feel it our duty to warn all to shun the meshes of that host of empirics who profess to cure this disease by their Syrian nostrums and boasted remedies; medicines which, in most cases, are as inoperative for good as they are mendacious in principle. A moral reformation, wholesome food, and a system of ablution, exercise, and external remedies, are the only practical means that can possibly influence the character or effect a cure in this disease.

SPHACELUS.—A surgical name for the *absolute death* of a part, the last stage of mortification, whether involving the skin, muscles, or bone. See MORTIFICATION, or GANGRENE.

SPHENOID.—The name of a bone common to the head and face, which, as the word implies (wedge-like), serves to fix the other bones above and around it in a perfect framework. From its situation at the base of the skull, the sphenoid bone gives origin to several muscles of the face and pharynx, such as the *spheno-palatine*, *spheno-pharyngeal*, and some others.

SPHINCTER.—A name common to several muscles which draw together, close, or bind certain apertures of the body; the most important of these oval or circular muscles is the *sphincter ani*, the door-keeper to the anus, and which, in its action, operates also on the urethra, assisting to void the last of the urine.

SPICA.—A name given to a long surgical bandage, because its frequent turns and folds give it, when applied, the appearance of an ear of corn.

SPICE.—All spices are carminative, aromatic, antispasmodic, stomachic, and stimulant, when used medicinally, and act as condiments when partaken of with food. See GINGER, NUTMEG, CLOVES, &c.

SPIDER'S WEB.—A popular remedy for arresting external bleedings from cuts and abrasions. Some astringent property is supposed to reside in the spider's web, which enables it to check the bleeding of a cut vessel. Be this as it may, though the cobweb will certainly arrest a trifling hæmorrhage when nothing else can be procured, the proper remedies are pressure, extract of lead, or adhesive plaster.

SPIGELIA MARILANDICA.—The botanical name of the plant known as the Indian Pink, a native, as the name implies, of Maryland, in North America. Though possessing cathartic, and, as is supposed, slightly tonic properties, it is only used as an anthelmintic. For dose and use see WORMS.

SPINA BIFIDA.—A disease of the spine, with which some infants are born, one or more of the bones of the vertebral column being deficient, and their space filled up by a soft tumour or fluid swelling.

SPINAL MARROW.—The continuation of the *medulla oblongata*, which, leaving the skull through the occipital foramen, enters the sheath formed for it by the bones of the vertebral column, and descends as low as the second lumbar vertebra, where it splits into eight thick nervous cords, the *cauda equina*, or horse's tail, which, piercing the holes in the bones of the *sacrum*, are eventually distributed over the pelvis. The spinal marrow, like the brain, is enclosed in membranes to protect it from contact with the bones which receive it, and is divided into two equal halves, each half consisting of three columns, the *anterior*, *posterior*, and *middle* or *lateral* column. From the first column are given off the nerves of motion—*motific;* from the second, the nerves of sensation—*sensific;* and from the last, the nerves of respiration—*respiratory*. Opposite every vertebra, the branch from the anterior and the posterior column passes out of the spinal column, and uniting, form a ganglion, from which is sent off a *compound nerve*, called a regular nerve, which proceeds to diffuse itself over the adjacent muscles, imparting to those parts both sensation and motion. The cord from the lateral column passes out at the same time, and is distributed upon the muscles and organs of respiration. The same system is continued all down the spine, till the spinal marrow splits into the *cauda equina*. See NERVES. The spinal marrow, like the brain, is subject to congestion, concussion, softening or ramollissement, inflammation, and many other affections, both functional and organic, and which in general demand a treatment the same as that for similar diseases of the brain.

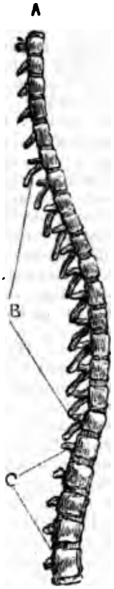
SPINATI.—A series of muscles of the spine to draw up the body, as the *spinalis colli*, or spinal muscle of the neck, whose duty is to draw back the head and straighten the neck after bending.

SPINA VENOSA.—A malignant ulceration of a bone without injury to the muscular or cellular tissues around it.

SPINE, THE.—The spinal column or pillar, on which the whole trunk, superior extremities, and head is supported, and which forms a hollow channel for the reception of the continuation of the brain and nervous system, and is composed of 30 separate bones, from the base of the skull to the bottom of the hips, namely, 7 cervical vertebræ, or bones of the neck; 12 dorsal vertebræ, or bones of the back; 5 lumbar vertebræ, or bones of the loins; 3 sacral or hip vertebræ, and 3 pieces of the os coccyx, the terminal bones of the spinal column—so called from the curved form of that bone, forming a fanciful resemblance to a cuckoo's beak.

Each of the twenty-four proper bones of the spine is composed of a body and ring, or cavity, four articulating surfaces, two above, and two below, a transverse, spinous, and two vertical processes, besides apertures or *foramena*, through which nerves pass out, and arteries and other vessels either enter or run up the column, and finally, articulating services on the dorsal bones, for the attachment of the ribs.

Between each of the 24 vertebræ is interposed a thick mass of elastic cartilage, called intervertebral cartilage, to prevent one bone from pressing on the other, and to impart to the column that springy, elastic motion and unfettered movement in all directions which gives such grace and ease to every action. It is the gradual compression of these intervening layers of cartilage, after a long or fatiguing day's labour, that accounts for the fact of a man measuring less at night than he does in the morning. Though the vertebræ in their entirety have been likened to a pillar, it is by no means a perpendicular one, for, viewed laterally, it presents several curves, particularly in the dorsal region, where the concavity looks forward, as shown in the following illustration of the spinal column.



THE SPINE.

A. The Cervical Vertebræ; B. The Dorsal Vertebræ; C. The Lumbar Vertebræ.

The spinal column is liable to the same diseases as other bones,—inflammation of the *periosteum; caries*, or death of a part of one of the bones, or of the substance of two or more, with *necrosis*, and exfoliation. Some of these diseases, as has been shown in *spina bifida*, are congenital, a bladder of liquid usurping the place of one or more vertebræ. The cure in such cases is almost hopeless, but what can be effected must be left to the surgeon to deal with as he best can. Distortion of the spine, or spinal curvature, is more frequent in females than males, and usually commences about the twelfth or fifteenth year, and in general arises in persons of scrofulous temperament, from the bad habit of sitting long in one awkward or relaxed attitude, by which the bones are pressed on each other, and rapidly assume a diseased action, and grow in the direction which the patient has been frequently reminded would happen.

Another cause of spinal distortion, and a very frequent one, is tight-lacing, especially about the age of 15 or 16, when young girls are just attaining symmetry and grace by the enlargement of the spine, which seldom attains its full development of strength and muscle under the age of 25 years. There are three kinds of curvature,—the angular, incurvation, and lateral.

The angular form takes place chiefly in the back, and generally proceeds from a habit of sitting long in one position, as in reading or study. Incurvation, or curving inwards of the spine, usually occurs in the loins, or low down, as far as the sacrum. In either case such an accident is one of serious injury to the pregnant woman, as when the incurvation is in the loins the fœtus has no room to rise during the middle months of gestation, and in the later, it seriously interferes with the descent of the head into the pelvis.

The most frequent of all such deformities is the lateral curvature of the spine, a deformity which, though it may commence in infancy, more frequently begins at ten years of age. Lateral curvature may either be to the right or left side, or in either of the three parts of the spine, though the loins is the most frequent seat of the disease. When the bones are affected, and there is a loss of substance, the curvature is always much stronger than when the muscles simply draw the bones out of their place. When the bone is diseased there is always suppuration, and infiltration of matter under the muscles, leading to pain, hectic fever, abscess, &c.

The *treatment* of spinal curvature has hitherto, or till very lately, been confined to mechanical means, and consisted in extension, pressure, and gymnastics. By the first the patient was either extended at his full length on his back or stomach, and by stretching the sinews and parting the bones of the spine for some time, he could weaken and overcome the unhealthy disposition existing; and by applying a force in the contrary direction of the muscles most in action, surgeons have endeavoured to counteract the curvature of the spine, but hitherto seldom with benefit. The next means, that of applying pressure by stays, boards, compresses and other applications, though largely recommended, is seldom greatly beneficial. The gymnastic system is to be taken into account with that of extension, and by means of a peculiarly constructed sofa the patient can lie in any position, and when tired of working or reading, by the adjustment of certain straps can amuse himself by swimming actions, by motions peculiar to rowing a boat, or by the exercise of sawing.

Where the bone is not diseased to the extent of *caries*, and the contracting power of the muscles that act on the spine is the main cause of the deformity, orthopædic surgeons are now in the habit of dividing the nerve of the contracting muscle or muscles, and by freeing the part of its constriction, allow it to return to its normal state. For the round-shouldered, slouching habit often adopted at school, or acquired from a careless way of standing or sitting, the best mode of treatment is to make the girl, whenever standing, wear something like a boa round her neck, each end being loaded with one or two pounds of lead, according to the time the bending has continued, and the amount of deformity. The wearing of such weights for a few weeks is certain to effect a cure, for the weight in front of the patient will compel the muscles of the back to be always on the stretch to keep the trunk from toppling over, and the person from falling on his or her face; the consequence is, that when the weights are withdrawn, the muscles of the back, relieved of the counterpoise, bring up the chest with a jerk, and insure an upright and imposing carriage. When the curvature is inwards, a heavy weight worn behind might, in the same way, or at least temporarily, relieve the deformity. The establishment of the Orthopædic Hospital has conferred a great blessing on humanity, and large numbers now walk the streets apparently in perfect physical integrity, who, but for this hospital, and the extra attention given to their cases, would have been doomed to a lifetime of deformity, suffering, or inconvenience.

SPIRIT LOTIONS, or Evaporating Lotions.—These may either be made by mixing 2 ounces of spirits of wine with 10 ounces of cold boiled water, or 4 ounces of brandy or whisky to the same quantity of water, and then applying the mixture on linen rags to the part. Or 3 drachms of ether, added to either of the above lotions, will materially increase the evaporation, and consequently increase the cold produced.

SPIRITS, ARDENT.—By this term is understood all liquids of an inflammable nature, obtained by the process of distillation, of which alcohol may be taken as the type. An interesting article might be written, had we space for the subject, or were it necessary to the aim of this work, upon the origin of distilled spirits, and the intoxicating liquids proper to each nationality. That a powerful spirit obtained from barley, and known as "barley wine," was in use among the Egyptians centuries before the brewing of ale was discovered, seems to be generally believed; and this, in all probability was the first ardent spirit with which mankind was acquainted. When, in the course of time, the knowledge of this article was lost, it seems probable that the first spirit subsequently discovered was made from the lees of wine, or the grapes from the winepress, to which the Arabian chemists gave the name of *alcohol*, and the people that of spirits of wine, and subsequently *aqua vitæ*, water of life, and usquebaugh, a pure and perfect spirit. All the spirits in use among the different nations of the world owe their properties to the amount of alcohol they contain, in combination with water, essential oil, and animal and vegetable matters.

Ardent spirits may be obtained from almost every vegetable substance, and from many animal fluids,—indeed, from the most dissimilar and contrary of articles; and though barley, wheat, rice, oats, and rye are regarded as the most legitimate sources of spirits, sugar, whether from the cane or from trees, and other vegetable juices, equally yield it, as indeed does the sap of the palm tree, and the juice of dates, and fruits of various kinds. Among the animal sources of spirit, milk is the most general, a very fiery and powerful liquid being obtained from the milk of mares, ewes, and goats. The purest and most universally used spirits are brandy, whisky, rum, hollands, and gin; alcohol, or rectified spirits, on account of its extreme strength, being used only for medicinal purposes.

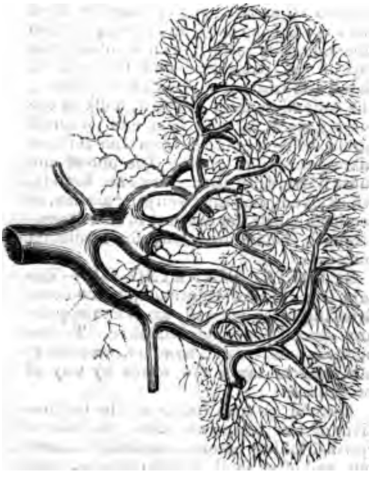
SPIRITS, DRINKING OF.—The injurious effect of habitual spirit or dram drinking is too generally known to require any special condemnation here. To the emigrant and settler, however, we deem it our duty to say a few words by way of precaution.

Hurtful as such habits are to the natives of this temperate clime, the vice of spirit-drinking becomes actually dangerous, and often fatal, in hot climates, even should the article partaken of be the same seasoned liquor to which the individual had been accustomed at home. In general, however, the emigrant or voyager, visiting foreign shores, meets only with the crude, newly-manufactured spirits of the country, and which, in almost every case, is certain to prove most baneful to the Englishman's constitution; this is particularly the case with the new rum of the United States and the West Indies, and the lan and arrack of Malacca and China.

The immediate consequences felt after drinking these and similar spirits by Europeans, are pains in the stomach and bowels, inducing dysentery and diseased liver, which, if unchecked, soon leads to a complication of mischief, sooner or later, followed by organic disease and premature death. It must not, however, be supposed that the habitual drunkard is the only person so affected by these crude spirits; the temperate man who indulges in those, to Europeans, dangerous stimulants, is, from the more susceptible state of his digestive organs, even more liable to their deadly influence than the man hardened and annealed to such fiery liquid.

SPITTING OF BLOOD.—See Blood, Spitting of, and Hæmoptysis.

SPLEEN.—The name of a flat, oval, spongy organ of the abdomen, lying on the left side, under the short or false ribs, and partly behind the colon. Though many theses have been written to prove the use of the spleen, and the special duty it performs in the animal economy, no thoroughly satisfactory explanation has yet been given on the subject. The ancients supposed it to be a receptacle for all the salts and impurities of the blood, and consequently the seat of all the ill-humours of the body, and the cause of anger, petulance, and those passions to which the name of splenetic has been given.



THE SPLENETIC ARTERY.
Showing its ramifications and minute subdivisions.

The Romans, believing the spleen was the seat of the sudden pain felt in the left side during running, or any too long sustained fatigue, were in the habit of cutting out the spleen bodily from those of their athletæ who were employed in running and wrestling.

SPLANCHNIC NERVES.—Properly this name signifies the nerves of the bowels or abdominal viscera; by it, however, anatomists understand two nerves only, distributed to the stomach, and having connection with the semilunar ganglion.

SPLENITIS.—Inflammation of the spleen.

SPLINT BONE.—The popular name for the small bone of the leg, the fibula.

SPLINTS.—Appliances used by surgeons to confine a fractured limb till the bone has reunited. Splints are of different shapes and lengths, and are either oval or in parallelograms, and consist of thin lengths of wood cut into narrow lines, and glued on sheep-skin, so that when applied they can be bent round and adapt themselves to the limb.

Every medicine chest should contain at least three sets of splints, for the use of children and adults. A length of thick pasteboard, cut of the proper size, and quickly passed through a basin of hot water, will at all times answer the purpose of a wooden splint, if put on over the pad while moist and pliable; the pasteboard becoming firm and of the proper shape as it dries on the limb. The fresh bark of a tree will also answer the purposes of a splint, if applied before it hardens. If nothing more convenient is at hand, a common hat or band-box may be cut into proper lengths and applied *double*, till a more resistant splint can be procured. See Fracture.

SPLIT-CLOTH.—A bandage for the head with four or eight tails. See Bandage.

SPONGE.—This well-known marine zoophite, or by some naturalists considered as the dwelling of innumerable zoophites, is obtained in the greatest abundance and of the best quality from Constantinople, the islands of the Archipelago, from Barbary, and other parts of the Mediterranean.

Though now generally used for the purposes of cleanliness, burnt sponge was extensively employed some forty years ago as a remedy for goitre and other scrofulous tumours, its efficacy depending on a large proportion of iodine contained in its ashes; the subsequent discovery of iodine, however, completely set aside the use of burnt sponge as a medicine.

With regard to the sponges used for purposes of ablution, and for the washing of sores, or for other surgical uses, too much care cannot be taken in the first instance to see that they are properly washed, rinsed, and dried after each toilet; and in the other, that not only the same attention is adopted as regards cleaning the sponge after use, but that the greatest care is taken that the sponge used for one patient is never employed for another, though the wound or the case may appear precisely the same.

SPONGING THE BODY. — This healthy and necessary mode of ablution may be performed either with cold or tepid water, or with cold water and vinegar, and independent of being at all times a source of cleanliness, may be performed with advantage in cases where affusion, or the shower bath, would be so great a shock to the system, and is most serviceable in reducing the heat of the body and promoting perspiration.

SPONGIO-PILINE. — This fabric, manufactured by Mr. Markwick, and for which he deservedly obtained a medal at the Great Exhibition, is one of the most useful and cleanly articles yet invented for the purpose of poultices or fomentation. This article is composed of shreds of sponge and wool felted together and backed on Indian rubber, so that while the thick pile absorbs and retains the water or fluid employed, the impervious nature of the back prevents both the heat escaping and the moisture exuding through it on to the clothes. No emigrant, indeed no family, should be without a piece of piline in readiness for any occasion of fomentation or poulticing that may occur. See FOMENTATION.

SPOON.—This is a domestic article in very frequent requisition in giving medicine, and though spoons generally are not made to contain an exact quantity, the different sizes are sufficiently uniform to be used as measures for ordinary articles. The *tea spoon* contains about 1 drachm, or 60 drops; the *dessert spoon*, 2 drachms, or a quarter of an ounce; and the *table spoon*, 4 drachms, or half an ounce. The old-fashioned tea spoon, now seldom met with, contains little more than half a drachm, or 30 drops. For the convenience of giving medicine to children, especially to restive and petulant children, a spoon has been invented with a lid or cover over two-thirds of its surface, so that its contents may be given without fear of the liquid being spilt. Mothers who have tiresome children to deal with should always use one of these medical spoons.

SPORADIC DISEASES. — A term applied by nosologists to diseases of an uncertain seat or variable origin, including hæmorrhage, cancer, dropsy, and diseases of special systems and origins, as meningitis, paralysis, mania, tetanus, &c.

SPRAIN.—This injury to the muscles and tendons, sometimes called a strain, is often, though slight in appearance, of more consequence to the patient than an actual fracture or dislocation of the bone, as the time these take to cure may be calculated almost to a day, while a sprain may incapacitate the person for an indefinite period.

The TREATMENT, wherever the injury may be, first of all demands rest, and if there is much swelling and heat, leeches or the cupping-glasses, with cold lotions, unless over joints, when the lotions should be applied *warm*. When the inflammation is subdued, friction and stimulating embrocations, with a supporting bandage, are to be employed; and afterwards, when a mere debility of the part remains, a stream of cold water should be daily directed on the part from such a height as to make the fall effective, the vitality being afterwards restored by dry and vigorous rubbing. Sometimes, but not often, blisters are necessary to restore activity to the torpid muscles. The following lotion, when a cold application is required, may be employed with advantage.

Take of—	
Sal ammoniac . . .	2 drachms.
Dissolve in—	
Camphor water . . .	1 pint.
Add—	
Sugar of lead	3 drachms.
Vinegar	4 ounces.
Mix, and make a lotion.	

When a hot lotion or fomentation is necessary, boil 1 ounce of camomile flowers fingers, and listening to the sounds evoked, and known as *percussion*.

AUSCULTATION.

By this term is understood the passage of air through the various structures of the lungs in inspiration and expiration, accompanied by certain sounds which are easily recognized on applying the ear or the stethoscope, laid on the chest. These sounds vary according as they are examined at different parts of the chest or neck; thus in the latter region the sound heard is called *tracheal* respiration; at the upper part of the sternum, *bronchial* respiration, while in other parts of the chest it is called *vesicular* respiration. Besides these, the usual sounds heard when the parts are moistened by their natural secretions, there are other sounds given out when there is an increased resistance offered to the passage of the air, either by a contraction of the part, or by the greater density of the fluids; these sounds are called *rhonchi*, or rattles, and are either dry or moist,—dry when the mucous membrane is swollen, or there is a constriction of the tubes, and moist when fluids of a thinner consistency are collected in the several parts of the lungs.

The following table gives the several names used by physicians to express the different phases of sound in healthy and diseased lungs.

SOUNDS PRODUCED IN NATURAL RESPIRATION.

Tracheal.—Heard in the neck.

Bronchial.—Heard at the top of the sternum, &c.

Vesicular.—Heard on most parts of the chest.

SOUNDS PRODUCED IN MORBID RESPIRATION.

Bronchial Respiration.—Caused by a condensed lung.

Cavernous and Amphoric.—Caused by diseased cavities communicating with the bronchi.

RHONCHI, MOIST.

Mucous.—Caused by fluid in the bronchi.

Crepitant.—Caused by viscid liquid in the air-cells.

RHONCHI, DRY.

Sibilant, Sonorous, Dry Mucous.—These three sounds are caused by a contraction of the bronchi, and by a swelling of the mucous membrane, &c.

Dry Crepitant.—Caused by emphysema.

Cavernous.—Caused by liquid in a morbid cavity.

NATURAL SOUND OF THE VOICE TRANSMITTED THROUGH THE CHEST.

Laryngophony.—Heard over the larynx.

Tracheophony.—Heard over the sternum.

Bronchophony.—Heard between the shoulders and over the sternum.

MORBID SOUNDS OF THE VOICE TRANSMITTED THROUGH THE CHEST.

Bronchophony.—Caused by a condensed lung.

Œgophony.—Caused by air vibrating through a thin layer of fluid.

Pectoriloquy.—Caused by a cavity in the lungs.

PERCUSSION.

Percussion is practised either by striking the part of the chest required with the points of the fingers or the flat of the hand, or else by laying the fingers of the left hand flat on the part to be examined, and then with the tips of those of the right, striking on them a few clear expressive taps, and at the same time so inclining the ear as to note the nature of the sounds elicited. A thin disc of wood, of gutta percha, metal, or ivory, may be laid on the chest instead of the left hand, and the gentle blows of the fingers given on that medium.

The sounds given out by percussion over the chest are divided into the clear and the dull, and are thus divided,—

CLEAR SOUNDS ON PERCUSSION.—These indicate a *healthy condition* of the lungs, a state of *emphysema*, or *tubercular excavation* of the organ.

DULL SOUND ON PERCUSSION shows the existence of *congestion* and *hepatization*, of *pulmonary apoplexy*, *œdema*, *tubercular deposit*, or *morbid degeneration*.

In all cases, to render the information perfect, auscultation and percussion should be employed together; the one as a confirmation of the other. As experience, under the guidance of a practical authority, can alone teach a person to understand the language of the sounds conveyed by percussion or by the stethoscope, it is unnecessary to say more on this subject, beyond giving the leading facts already recorded. The series of sounds given off from the heart and from the uterus, when the stethoscope is employed to test the state of the one or the pregnancy of the other, or to discover the condition of the œtus, is still more complicated than those n regard to the lungs, and can only be equired by close study of the science on he living subject.

STIBIUM AND STIMMI.—The names ormerly given to antimony.

STICKING PLASTER.—Black and White. See ADHESIVE and COURT PLASTER.

STIFF JOINT.—For the cause and treatment of this affection of the joints, see ANCHYLOSIS.

STIGMA.—A small red spot on the skin, common to cutaneous affections.

STILLBORN.—A child born dead, at any period between the end of the seventh and ninth month.

STIMULANTS.—A class of medicines embracing a wider range of articles than any other in the materia medica. Stimulants are either local or general, as they are applied to a part, or taken into the system. General stimulants, again, are divided into the common and diffusible.

STINGS.—We have already, under the articles "Bites" and "Serpent," treated of all the venomous injuries inflicted by reptiles and insects; it is only now necessary to say, that for the stings of common insects, a little extract of lead will generally subdue any pain caused by the sting. A little olive oil, or a strong solution of potass or ammonia, will answer the purpose equally well, but these generally excite an additional pain. See SERPENT, BITES OF.

STITCH IN THE SIDE.—A spasmodic pain in the muscles of the side. See SIDE, PAIN IN.

STOMACH.—One of the most important organs in the body, and the centre of digestion and nutrition. The stomach is one of the abdominal viscera, and in shape resembles a bagpipe; it lies across the abdomen, from the left to the right side, below the liver, and partly covered by the diaphragm. The stomach has two openings, one to admit the termination of the gullet, and called, from its lying below the heart, the cardiac opening; and the other, where it joins the *duodenum*, or small intestines, and called the pyloric orifice, pylorus, or the gatekeeper, from the peculiar arrangement of the circular fibres which so effectually constrict this aperture, that nothing can pass unless perfectly digested, and only then at stated times. The stomach consists of three coats, an internal mucous lining, a muscular or middle coat, and an external or serous coat, supplied to it by the peritoneum, or the lining membrane of the abdomen. Some anatomists give the stomach four coats, accounting the cellular tissue, that lies between the mucous and muscular coats, in which the nerves and vessels circulate, as a fourth coat.

The muscular coat consists of three sets of delicate fibres, one running transversely, another in a circular manner, and the third pursuing a diagonal direction. From this arrangement of its fibres, it is evident that the action of the stomach is a gradual and uniform contraction to the centre, succeeded by a general expansion.

The mucous coat is covered with alternate depressions and elevations; the former are called *follicles*, or glands, and the latter *villi*. As soon as food is taken into the stomach, an extra amount of arterial blood is sent to the organ to supply the secretion known as gastric juice, that peculiar acid and solvent fluid so necessary to the maceration of the aliment taken; the gastric juice being secreted from the minute branches into which the gastric arteries are subdivided. See DIGESTION.

The stomach, like other organs, is liable to inflammation, though, from the manner in which it is abused, much more seldom than might be expected; indeed, except when actual poisons are taken into it, that form of disease may be regarded as remarkably rare. Chronic inflammation and functional derangements, however, are remarkably frequent, sometimes arising from a deficiency in quantity and acidity of the gastric juice, at others from an excess both in quantity and acridity. In the one case an artificial gastric juice is necessary; in the other, an alkali, either potass or soda, is required to correct the over-stimulating nature of the natural fluid. As a substitute for the proper secretion, the following mixture may be taken in doses of from two to three tablespoonfuls half an hour before each meal.

Artificial Gastric Juice.—Take of—

Muriate of soda (common salt)	3 drachms.
Bicarbonate of potass .	2 scruples.
Cold boiled water . .	7 ounces.

Dissolve, and add—

Vinegar	1 ounce.
Diluted muriatic acid .	30 drops.

Mix. For the treatment of other affections of the stomach, see INDIGESTION, &c.

Of the parasites that occasionally infest the stomach, whether animal or vegetable, we do not intend to speak; the subject is too vague and unsatisfactory, and the cases authenticated too far between, to applied to the inspissated or expressed juice of plants.

SUDDEN DEATH.—Nothing is more appalling to friends and relatives than the sudden falling to the ground of a person in our midst, or while walking by our side in the street, and discovering on raising him up, that he who but a moment before was in the possession of all his faculties, and the enjoyment of health and life, is a mere inert mass, deprived of sense or motion.

Though the cause that induces such an abrupt calamity is often fatal, and absolute death is instantaneous, cases no doubt frequently occur, where, from a belief in the certainty of death, cases that might possibly have been recovered are left without an attempt at restoration, from the supposed hopeless nature of the case. As cases of sudden death are sometimes only suspensions of the functions of life, friction should be employed along the spine, hot bottles or mustard plasters applied to the feet and legs, and those means, with artificial respiration, adopted, as laid down under Drowning, in the hope to bring back the functions of the lungs. When, after some hours' perseverance with these means, there are signs of returning animation, a few teaspoonfuls of brandy and water are to be given, but with care. See Drowning.

SUDOR.—Sweat, excessive perspiration.

SUDORIFICS.—A class of medicines given to produce sweating, as diaphoretics are those drugs which are employed to promote perspiration. See Diaphoretics.

SUFFOCATION.—Dying from the want of air. Whatever cause prevents a due access of atmospheric air to the lungs produces suffocation; thus hanging, drowning, and the inhalation of noxious gases, all induce suffocation. See Hanging and Drowning. For the suffocation caused by noxious gases, the treatment is instant removal to the open air, dashing cold water on the face and chest, the application of warmth to the body, hot water to the feet, and mustard poultices to the thighs and legs. See Suspended Animation.

SUGAR is one of the most universally found substances in nature; every plant and vegetable yielding it more or less abundantly. Sugar, as we have shown under the article Food, is one of the heat-*forming* elements, and on that account is a necessary of life. When not taken in its perfect form, the stomach has the power of converting all the starch it receives into sugar. Sugar, on account of the carbon it yields, as fuel to the lungs, is an article of great importance, and as a food, an aliment of the utmost consequence to the young, who should always be given plenty of it in their daily dietary. With the adult, or persons of weak stomachs, sugar is apt to pass into the acetous fermentation, and so become a source of inconvenience and pain.

SUGAR OF LEAD.—Acetate of lead, formerly known as *saccharum Saturni*, or the sugar of Saturn; the name given by old chemists to lead. Sugar of lead, though in excess a strong poison, is a very valuable drug both for internal and external use as an astringent. The only diseases in which it is employed internally are those of hæmorrhage, either from the stomach or the lungs, for which it may be given in doses of 1 or 2 grains, either in pills or powder, every three hours, alone or with kino and opium, and that too with perfect safety, as long as it is kept in a state of *acetate*. To prevent any acid in the stomach converting it into a more potent salt, the patient, while taking sugar of lead, should be ordered a little weak vinegar and water with each pill or powder, or what is much better, take frequent draughts of buttermilk—the best possible beverage in cases of hæmorrhage. As an external application for sprains, where an astringent lotion is required, sugar of lead makes the best that can be employed if used in sufficient quantity. The following lotion, either applied cold or hot, will be found most beneficial in all cases of severe sprains or inflammations of the joints. Take of—

Sugar of lead . . .	4 drachms.
Camphor water . . .	1 pint.
Vinegar	4 ounces.

Dissolve, and use on piline or linen rags.

SULPHATES.—Salts composed of sulphuric acid and a base, as the sulphate of soda and sulphate of magnesia, glauber and Epsom salts.

SULPHUR, OR BRIMSTONE.—A yellow, dry substance, which in burning yields a suffocating fume, and is generally obtained in Italy, Switzerland, and South America, lying beneath the earth in certain localities; it is also obtained from nearly all the metals—the sulphurets—by sublimation, and from some of the orders of the vegetable kingdom.

Medical Properties and Preparations.—Sulphur acts on the system as a diaphoretic, deobstruent, and purgative; and is particularly efficacious in obstinate skin diseases, highly serviceable in rheumatism, obstructions of the biliary ducts, and in enlargement of the liver.

Sulphur is kept in three forms in the shops,—1st, that of roll sulphur; 2nd, sublimed sulphur; and 3rd, the milk of sulphur, which is simply sulphur levigated and washed, and is one of the most convenient forms in which it can be given. The adult dose of either the sublimed or milk of sulphur, as a diaphoretic or deobstruent, is from half a drachm to 1½ drachm; and as an aperient from 2 to 4 drachms. Sulphur combined with treacle is a popular remedy for unhealthy children, as a purifier of the blood; and for acting on the bowels, and correcting the state of the system, it is certainly a very efficacious medicine.

By burning sulphur in leaden chambers, with water at the bottom, and allowing a due portion of air to enter the chamber, the chemist obtains sulphuric acid, or vitriol, that acid which enters into combination with so many bases, forming the salts known as sulphates. The only preparations of sulphur are a confection and an ointment; the latter used only in skin diseases.

SULPHURIC ACID.—Vitriol. The diluted sulphuric acid, either alone, or mixed with some spices, and coloured with red Saunders wood, and called elixirs of vitriol, are the only preparations of this article employed; each of them being used in doses of from 5 to 15 drops, as an astringent in cases of hectic fever or hæmorrhage.

SUMBUL.—The root of an unknown Asiatic plant, lately admitted into the Pharmacopœia.

SUNSTROKE.—This accident, common to tropical climates, and to which Europeans are very liable from long exposure to the sun's rays, particularly from the habit of incautiously taking off the hat, or working for only a few minutes bareheaded, produces a condition strongly resembling apoplexy, accompanied with total prostration and loss of memory, and if not quickly relieved may lead to fatal results.

Treatment.—Remove the patient under a shade, dash cold water on the face and head, bleed, apply a blister to the nape of the neck, mustard poultices to the legs and bottom of the spine, and rub the rest of the spinal column with a liniment made of equal parts of hartshorn, oil, and turpentine. Should the symptoms assume the form of inflammation of the brain, the treatment must be the same as for that disease.

SUPER.—Above, over. A term used by chemists and anatomists; by the former to signify an excess, or larger quantity—as a super-acetate, or a salt with a larger quantity of vinegar; and by the latter to indicate some muscle or part, as the *super spinatus*, a muscle above the spine, of the scapula, &c.

SUPINATION.—Turning the hand or the body over on the back; the opposite action to *pronation*, where the face or the palm is downwards; in supination the face and the palm are turned upwards. The muscles that roll the hand in this direction are called *supinators*.

SUPPOSITORY.—A solid medicine made about an inch long, and of the calibre of a penholder, to be passed up the fundament, where it is allowed to remain till naturally expelled. Suppositories are used to allay pain and irritation, and are often of the most signal service, and on that account will be frequently met with in this work. Suppositories are generally made of 4, 6, or 8 grains of solid opium, rolled into an oblong form, greased, and passed into the bowel; care being taken that they are pushed above the sphincter muscle of the anus.

SUPPURATIVES.—Articles supposed to encourage the formation of matter or pus, and mature an abscess. Hot fomentations and poultices are the best of such agents.

SURDITUS.—Deafness; hardness of hearing.

SURFEIT, A. — An indisposition caused by overcharging the stomach, by an excess in eating or drinking; generally the former, and most frequently by partaking to repletion of some kind of food. A surfeit, however, frequently occurs to persons of a very temperate habit, and from partaking very sparingly of the article that caused it. Shell-fish, cheese, dried meat, or sausages often produce what is called a surfeit, indicated by sickness, pain in the head, a hot, dry skin, and a most uncomfortable sensation generally. An emetic in all cases is the best and quickest remedy: a glass of warm water, with a teaspoonful of salt in it, will always effect the purpose if no other emetic is at hand.

SUSPENDED ANIMATION.—It has been truly said that the conscientious and liberal-minded medical man is always a student, acquiring new facts and fresh render it absolutely necessary, further than what will be referred to under Worms, which see.

STOMACHICS.—Medicines to give tone to the stomach and promote digestion. The principal articles of this class are gentian, camomile, rhubarb, orange and lemon peel, and colombo, taken in infusion with a little ginger or cardamom seeds, and to which carbonate of soda or potass is to be added. Gregory's powder is one of the most pleasant of all the stomachics.

STOMACH-PUMP. — This very valuable instrument is a kind of large syringe, which, by means of a key-lever, has a double action, one to inject liquid and the other to withdraw it. A long, flexible tube being attached to the end of the syringe, is passed through a wooden bit fitted to the mouth to prevent the teeth of the patient biting it; the tube is then passed into the stomach, while a short tube attached to the bottom of the syringe reaches to a basin held by an assistant, containing the warm water to be used; the operator then draws the piston of his syringe, by which it becomes filled from the basin; he then elevates the key or valve, and driving home the piston, the liquid is thrown into the stomach; he then drops the key, once more fills from the basin, raises the lever, and propels another quantity into the stomach, and in this manner continues till the quantity intended is thrown into the organ. He now reverses the operation of the piston and the valve, and the contents injected, mixed with those in the stomach, are drawn off and pumped into the basin. See POISONS.

STOMACH, SPASMS OR CRAMP OF.—This painful and alarming state may proceed from various causes: such as the sudden application of cold, or it may arise from indigestible fruits or food, from bile regurgitating into the organ, from congestion of the liver, from gout or rheumatism, and, finally, from a draught of cold water when the body is heated, or from swallowing pieces of ice. A hot bath, or warm fomentations, are generally the best external remedies for spasm of the stomach, and an emetic the most useful and effective internal means, followed by such after-treatment as the exciting cause seems to justify or demand.

STONE.—For the symptoms of this complaint, see URINARY ORGANS, DISEASES OF.

STORAX.—A balsamic resin similar to *tolu*, yielded by the *Styrax officinalis*, a tropical plant belonging to the Natural order *Styraceæ*. Though now seldom used, storax was formerly in great request as a stimulating expectorant, but has been superseded by squills and tolu.

STRAMONIUM, OR THORN APPLE.—The *Datura stramonium*. The thorn apple belongs to the Natural order *Solanaceæ*, and is, consequently, acrid and narcotic; and though it has been tried in many diseases, on account of the risk attending its employment has fallen entirely into disuse as an internal remedy. The cut leaves and stems are, however, used to some extent as a tobacco in chronic asthma, the patient smoking it in a common pipe, and in this form it often affords considerable relief.

STRIATA CORPORA.—Two eminences in the lateral ventricles of the brain.

STRICTURE. — A tightening, contraction, a drawing or growing together in some passage or tube. A spasmodic contraction or stricture of the muscular coat of the œsophagus or gullet is by no means a rare event in cases of hysteria, but may be easily overcome by a slap between the shoulders, or the sudden application of cold. The organs, however, where a natural stricture or growing together of the part is most frequent, are the urethra of the male, and the rectum; often, however, a nervous stricture exists at the same time in the former part, and not unfrequently two natural strictures occur at the same time, one a short way up, and the other near the bulb of the urethra.

STRICTURE OF THE RECTUM may arise, in either sex, from abdominal tumours pressing on the bowel, or from a ring of piles forming round the rectum. A natural stricture of the part, an actual contraction of the rectum, is a very rare disease, though some years ago it was one of the empiricisms of the profession to assert the contrary. Where such a case really exists, the treatment is the same as in urethral stricture, by the passage of proper bougies.

STRICTURE OF THE URETHRA is almost always the result of inflammatory action, induced by gonorrhœa, and is accompanied by a discharge called a gleet. The only reliable symptom of this disease is the twirling or corkscrew motion given to the water when discharged.

The TREATMENT resides entirely in mechanical means, and the attempt to break down or expand the constriction; this is effected by passing bougies,

lly increasing the size of the in-
nt till the natural passage is
d.

IDER DENTIUM.—Grinding of
th; a symptom of worms, or some
n of the head common to children.

IGIL.—The bent scraper used by
mans in the bath to force out the
ting perspiration. See ABSTER-
, *cut.*

ONTIUM.—A metal discovered in
rth of Scotland, chiefly used for
nufacture of red fire.

OPHULUS.—An order of eruptive
of a papular form, such as tooth
ed gum, &c.

UMA.—King's evil, scrofula.

YCHNIA, OR STRYCHNIN.—
eadly poison, the active principle
Strychnos nux vomica, is one of the
fatal and agonizing of all the
ble or mineral poisons, throwing
dy into the most violent and
convulsions, producing, in fact,
outward symptoms of tetanus. On
count, and in consequence of its
on the nervous system, it has been
ed in medicine as a remedy for the
ymptoms it produces when taken
ss or as a poison. For the better
ment of this dangerous drug, the
harmacopœia orders a preparation
the *liquor strychniæ*. In no
owever, should this drug be pre-
or taken by a non-professional
.

POR.—A state of partial insensi-
a symptom of apoplexy, of
ing with narcotic drugs, and of
l affections generally.

E.—The popular name for a small
r on the ciliary ridge of the eyelid.
ling of one of the meibomian glands,
all follicles which supply nourish-
to the eyelashes. Children are
bject to these painful little tumours,
often proceed from an unhealthy
ion of the body. The best local
ent is friction, either with a ring
edge of the nail. It is a popular
that stroking the stye *nine times*
wedding-ring once a day is a certain
That gently scraping the tumour
he edge of a ring is sure to produce
tion is an unquestionable fact, but
r it is a gold or a brass ring, a
g or a curtain one, is of no manner
equence. The number of times it
, however, is of importance, ninety
being ten times better than nine.
internal remedy, a daily dose of senna and Rochelle salts is one of the best means that can be employed.

STYLOID.—The name of a thin, pencil-like process of the temporal bone, from which the three muscles, known as the *stylo-hyoideus*, *stylo-glossus*, and *stylo-pharyngeus*, arise.

STYPTIC.—Any powerful astringent used to check the effusion of blood. A styptic, properly speaking, is some drug that will draw together the wounded vessels, and by that contraction check the hæmorrhage. As yet, however, no such remedy has been discovered. Powdered alum, nitrate of silver, bluestone, Friar's balsam, and Dutch drops are the common styptics in use, with tow, cotton, wool, and cobwebs as mechanical means. The best styptic of all, however, is pressure over the injured vessel.

ST. ANTHONY'S FIRE. See ERYSIPELAS.

SUB.—A Latin word, used in chemical pharmacy to express something that has less than another, or is under or below the standard, as the sub-carbonate of potass or soda; sub-acid, slightly acid. It is also used by anatomists to express the relative situation of a part, as the *sub-scapularis*, a muscle below the scapula; and *sub-lingual*, *sub-maxillary* glands, and *sub-clavian*, or underneath the clavicle.

SUBLIMATE, CORROSIVE.—Corrosive sublimate, or the oxymuriate or bichloride of mercury, which see.

SUBLIMED SULPHUR. See SULPHUR.

SUBLINGUAL.—Under the tongue. A name applied to the two salivary glands, and also to the artery and vein circulating in that neighbourhood.

SUCCEDANEUM.—A substitute; any medicine employed for another. The term is chiefly used in reference to dental preparations or artificial teeth.

SUCCINUM.—Amber.

SUCCORY.—A well-known garden plant, somewhat like endive. There is both a wild and a cultivated succory, and though, unfortunately, excluded from the Pharmacopœia, both varieties possess properties of a very valuable nature, especially in obstructions of the liver and derangement of the spleen; and also in dropsies, jaundice, and chronic affections of the stomach, for which it was formerly given as a decoction with great benefit, and might still be employed with advantage in all such cases.

SUCCUS.—A juice. A term generally

applied to the inspissated or expressed juice of plants.

SUDDEN DEATH.—Nothing is more appalling to friends and relatives than the sudden falling to the ground of a person in our midst, or while walking by our side in the street, and discovering on raising him up, that he who but a moment before was in the possession of all his faculties, and the enjoyment of health and life, is a mere inert mass, deprived of sense or motion.

Though the cause that induces such an abrupt calamity is often fatal, and absolute death is instantaneous, cases no doubt frequently occur, where, from a belief in the certainty of death, cases that might possibly have been recovered are left without an attempt at restoration, from the supposed hopeless nature of the case. As cases of sudden death are sometimes only suspensions of the functions of life, friction should be employed along the spine, hot bottles or mustard plasters applied to the feet and legs, and those means, with artificial respiration, adopted, as laid down under Drowning, in the hope to bring back the functions of the lungs. When, after some hours' perseverance with these means, there are signs of returning animation, a few teaspoonfuls of brandy and water are to be given, but with care. See DROWNING.

SUDOR.—Sweat, excessive perspiration.

SUDORIFICS.—A class of medicines given to produce sweating, as diaphoretics are those drugs which are employed to promote perspiration. See DIAPHORETICS.

SUFFOCATION.—Dying from the want of air. Whatever cause prevents a due access of atmospheric air to the lungs produces suffocation; thus hanging, drowning, and the inhalation of noxious gases, all induce suffocation. See HANGING and DROWNING. For the suffocation caused by noxious gases, the treatment is instant removal to the open air, dashing cold water on the face and chest, the application of warmth to the body, hot water to the feet, and mustard poultices to the thighs and legs. See SUSPENDED ANIMATION.

SUGAR is one of the most universally found substances in nature; every plant and vegetable yielding it more or less abundantly. Sugar, as we have shown under the article Food, is one of the heat-*forming* elements, and on that account is a necessary of life. When not taken in its perfect form, the stomach has the power of converting all the starch it receives into sugar. Sugar, on account of the carbon it yields, as fuel to the lungs, is an article of great importance, and as a food, an aliment of the utmost consequence to the young, who should always be given plenty of it in their daily dietary. With the adult, or persons of weak stomachs, sugar is apt to pass into the acetous fermentation, and so become a source of inconvenience and pain.

SUGAR OF LEAD.—Acetate of lead, formerly known as *saccharum Saturni*, or the sugar of Saturn; the name given by old chemists to lead. Sugar of lead, though in excess a strong poison, is a very valuable drug both for internal and external use as an astringent. The only diseases in which it is employed internally are those of hæmorrhage, either from the stomach or the lungs, for which it may be given in doses of 1 or 2 grains, either in pills or powder, every three hours, alone or with kino and opium, and that too with perfect safety, as long as it is kept in a state of *acetate*. To prevent any acid in the stomach converting it into a more potent salt, the patient, while taking sugar of lead, should be ordered a little weak vinegar and water with each pill or powder, or what is much better, take frequent draughts of buttermilk—the best possible beverage in cases of hæmorrhage. As an external application for sprains, where an astringent lotion is required, sugar of lead makes the best that can be employed if used in sufficient quantity. The following lotion, either applied cold or hot, will be found most beneficial in all cases of severe sprains or inflammations of the joints. Take of—

Sugar of lead . . .	4 drachms.
Camphor water . . .	1 pint.
Vinegar	4 ounces.

Dissolve, and use on piline or linen rags.

SULPHATES.—Salts composed of sulphuric acid and a base, as the sulphate of soda and sulphate of magnesia, glauber and Epsom salts.

SULPHUR, OR BRIMSTONE.—A yellow, dry substance, which in burning yields a suffocating fume, and is generally obtained in Italy, Switzerland, and South America, lying beneath the earth in certain localities; it is also obtained from nearly all the metals—the sulphurets—by sublimation, and from some of the orders of the vegetable kingdom.

MEDICAL PROPERTIES AND PREPARATIONS.—Sulphur acts on the system as a diaphoretic, deobstruent, and purgative; and is particularly efficacious in obstinate skin diseases, highly serviceable in rheumatism, obstructions of the biliary ducts, and in enlargement of the liver.

Sulphur is kept in three forms in the shops,—1st, that of roll sulphur; 2nd, sublimed sulphur; and 3rd, the milk of sulphur, which is simply sulphur levigated and washed, and is one of the most convenient forms in which it can be given. The adult dose of either the sublimed or milk of sulphur, as a diaphoretic or deobstruent, is from half a drachm to 1½ drachm; and as an aperient from 2 to 4 drachms. Sulphur combined with treacle is a popular remedy for unhealthy children, as a purifier of the blood; and for acting on the bowels, and correcting the state of the system, it is certainly a very efficacious medicine.

By burning sulphur in leaden chambers, with water at the bottom, and allowing a due portion of air to enter the chamber, the chemist obtains sulphuric acid, or vitriol, that acid which enters into combination with so many bases, forming the salts known as sulphates. The only preparations of sulphur are a confection and an ointment; the latter used only in skin diseases.

SULPHURIC ACID.—Vitriol. The diluted sulphuric acid, either alone, or mixed with some spices, and coloured with red Saunders wood, and called elixirs of vitriol, are the only preparations of this article employed, each of them being used in doses of from 5 to 15 drops, as an astringent in cases of hectic fever or hæmorrhage.

SUMBUL.—The root of an unknown Asiatic plant, lately admitted into the Pharmacopœia.

SUNSTROKE.—This accident, common to tropical climates, and to which Europeans are very liable from long exposure to the sun's rays, particularly from the habit of incautiously taking off the hat, or working for only a few minutes bareheaded, produces a condition strongly resembling apoplexy, accompanied with total prostration and loss of memory, and if not quickly relieved may lead to fatal results.

TREATMENT.—Remove the patient under a shade, dash cold water on the face and head, bleed, apply a blister to the nape of the neck, mustard poultices to the legs and bottom of the spine, and rub the rest of the spinal column with a liniment made of equal parts of hartshorn, oil, and turpentine. Should the symptoms assume the form of inflammation of the brain, the treatment must be the same as for that disease.

SUPER.—Above, over. A term used by chemists and anatomists; by the former to signify an excess, or larger quantity—as a super-acetate, or a salt with a larger quantity of vinegar; and by the latter to indicate some muscle or part, as the *super spinatus*, a muscle above the spine, of the scapula, &c.

SUPINATION.—Turning the hand or the body over on the back; the opposite action to *pronation*, where the face or the palm is downwards; in supination the face and the palm are turned upwards. The muscles that roll the hand in this direction are called *supinators*.

SUPPOSITORY.—A solid medicine made about an inch long, and of the calibre of a penholder, to be passed up the fundament, where it is allowed to remain till naturally expelled. Suppositories are used to allay pain and irritation, and are often of the most signal service, and on that account will be frequently met with in this work. Suppositories are generally made of 4, 6, or 8 grains of solid opium, rolled into an oblong form, greased, and passed into the bowel; care being taken that they are pushed above the sphincter muscle of the anus.

SUPPURATIVES.—Articles supposed to encourage the formation of matter or pus, and mature an abscess. Hot fomentations and poultices are the best of such agents.

SURDITUS.—Deafness; hardness of hearing.

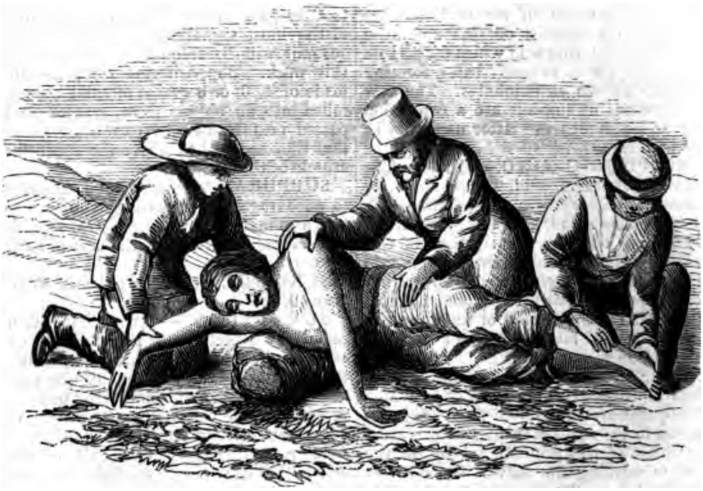
SURFEIT, A.—An indisposition caused by overcharging the stomach, by an excess in eating or drinking; generally the former, and most frequently by partaking to repletion of some kind of food. A surfeit, however, frequently occurs to persons of a very temperate habit, and from partaking very sparingly of the article that caused it. Shell-fish, cheese, dried meat, or sausages often produce what is called a surfeit, indicated by sickness, pain in the head, a hot, dry skin, and a most uncomfortable sensation generally. An emetic in all cases is the best and quickest remedy: a glass of warm water, with a teaspoonful of salt in it, will always effect the purpose if no other emetic is at hand.

SUSPENDED ANIMATION.—It has been truly said that the conscientious and liberal-minded medical man is always a student, acquiring new facts and fresh intelligence to the last hour of his professional practice.

The truth of the saying is verified in the present article. For years the medical profession have been content to treat such cases of suspended animation as resulted from drowning, on the principles laid down by Dr. Marshall Hall; the Royal Humane Society, however, have lately published a new series of rules, based on Dr. Sylvester's system, for restoring persons apparently dead, and that the method of treatment may be fully understood, both by medical men and non-professionals, a series of illustrations—more expressive than any description—have been printed with each set of rules. Much as we have hitherto appreciated Dr. M. Hall's system, we are so convinced of the superiority of Dr. Sylvester's additions and improvements, that we have not only transcribed his concise and able directions for the management of such cases, but have had accurate copies made of the cuts, so as to make perfect the whole system. If the reader refers to the article Drowning, he will perceive in what Dr. Sylvester's plan differs from that hitherto adopted on Dr. Hall's principle.

THE RESTORATION OF THE APPARENTLY DROWNED.

The following instructions for the Restoration of the apparently dead from drowning are now being issued by the National Lifeboat Institution. They are the result of extensive inquiries recently made by the institution amongst medical men, medical bodies, and coroners throughout the United Kingdom. Possessed of this valuable information, the committee of the Lifeboat Society have felt justified in acting on it. After having been carefully considered, and the several opinions thus collected compared one with another, the committee have caused the following instructions, based on the plans of Dr. Marshall Hall and Dr. H. R. Sylvester, to be printed, and the same are about to be extensively circulated on the coasts and elsewhere. Aided by four excellent illustrations, the plan of the institution for the restoration of the apparently dead from drowning is made intelligible to every one, and this additional important *service* rendered by the Lifeboat Institution cannot fail to elicit the approbation of the community at large.



I. Send immediately for medical assistance, blankets, and dry clothing, but proceed to treat the patient ***instantly*** on the spot, in the open air, with the face downward, whether on shore or afloat; exposing the face, neck, and chest to the wind, except in severe weather, and removing all tight clothing from the neck and chest, especially the braces.

The points to be aimed at are,—first

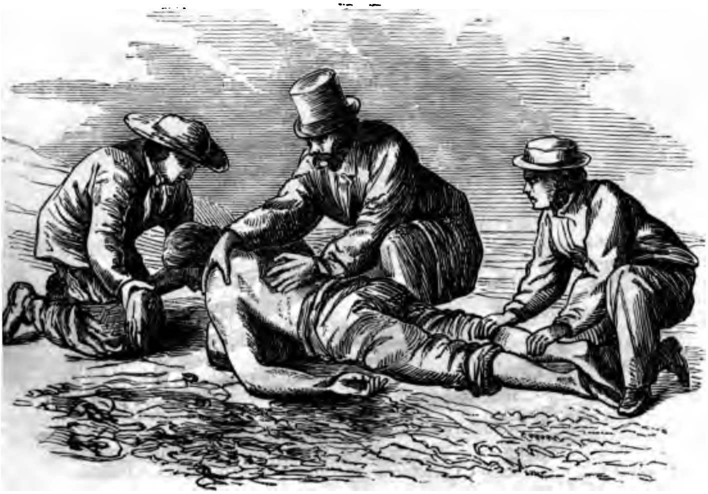
and *immediately*,—the RESTORATION OF BREATHING; and secondly, after breathing is restored, the PROMOTION OF WARMTH AND CIRCULATION.

The efforts to *restore breathing* must be commenced immediately and energetically, persevered in for one or two hours, or until a medical man has pronounced that life is extinct. Efforts to promote *warmth* and *circulation*, beyond removing the wet clothes and drying the skin, must not be made until the first appearance of natural breathing. For if circulation of the blood be induced before breathing has recommenced, the restoration to life will be endangered.

II. TO RESTORE BREATHING.—*To clear the Throat.*—Place the patient on the floor or ground, with the face downwards, and one of the arms under the forehead, in which position all fluids will more readily escape by the mouth, and the tongue itself will fall forward, leaving the entrance into the windpipe free. Assist this operation by wiping and cleansing the mouth.

If satisfactory breathing commences, use the treatment described below to promote warmth. If there be only slight breathing, or no breathing, or if the breathing fail, then—

TO EXCITE BREATHING.—Turn the patient well and instantly on the side, supporting the head, and excite the nostrils with snuff, hartshorn, and smelling salts, or tickle the throat with a feather, &c., if they are at hand. Rub the chest and face warm, and dash cold water, or cold and hot water alternately, on them. If there be no success, lose not a moment, but instantly—



To imitate Breathing.—Replace the patient on the face, raising and supporting the chest well on a folded coat or other article of dress. Turn the body very gently on the side and a little beyond, and then briskly on the face, back again; repeating these measures cautiously, efficiently, and perseveringly about fifteen times in the minute, or once every four or five seconds, occasionally varying the side. [*By placing the patient on the chest, the weight of the body forces the air out; when turned on the side this pressure is removed, and air enters the chest.*]

On each occasion that the body is replaced on the face, make uniform but efficient pressure with brisk movement on the back between and below the shoulder-blades or bones on each side, removing the pressure immediately before turning the body on the side.

During the whole operation let one person attend solely to the movements of the head, and of the arm placed under it.

[*The first measure increases the expiration—the second commences inspiration.*]

⁂ The result is *respiration*, or *natural breathing*;—and, if not too late, *life*.

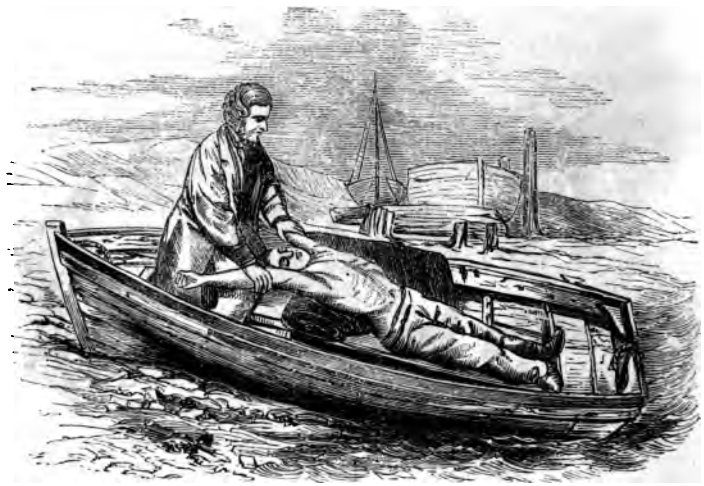
Whilst the above operations are being proceeded with, dry the hands and feet; and as soon as dry clothing or blankets can be procured, strip the body, and cover or gradually reclothe it, but taking care not to interfere with the efforts to restore breathing.

III. Should these efforts not prove successful in the course of from two to five minutes, proceed to imitate breathing by Dr. Sylvester's method, as follows:—

Place the patient on the back, on a flat surface, inclined a little upwards from the feet; raise and support the head and shoulders on a small, firm cushion or folded article of dress placed under the shoulder-blades.

Draw forward the patient's tongue, and keep it projecting beyond the lips; an elastic band over the tongue and under the chin will answer this purpose, or a piece of string or tape may be tied round them, or by raising the lower jaw the teeth may be made to retain the tongue in that position. Remove all tight clothing from about the neck and chest, especially the braces.

To imitate the movements of breathing.—Standing at the patient's head, grasp the arms just above the elbows, and draw them gently and steadily upwards above the head, and *keep them stretched* upwards for two seconds. [*By this means air is drawn into the lungs.*] Then turn down the patient's arms, and press them gently and firmly for two seconds against the sides of the chest. [*By this means air is pressed out of the lungs.*]



Repeat these measures alternately, deliberately, and perseveringly, about fifteen times in a minute, until a spontaneous effort to respire is perceived, immediately upon which cease to imitate the movements of breathing, and proceed to INDUCE CIRCULATION AND WARMTH.

IV. TREATMENT AFTER NATURAL *BREATHING* HAS BEEN RESTORED.—To *promote Warmth and Circulation.*—Commence rubbing the limbs upwards, with firm grasping pressure and energy, using handkerchiefs, flannels, &c. [*By this measure the blood is propelled along the veins towards the heart.*]

The friction must be continued under the blanket or over the dry clothing.

Promote the warmth of the body by the application of hot flannels, bottles, or bladders of hot water, heated bricks, &c.,

to the pit of the stomach, the armpits, between the thighs, and to the soles of the feet.

If the patient has been carried to a house after respiration has been restored, be careful to let the air play freely about the room.

On the restoration of life, a teaspoonful of warm water should be given; and then, if the power of swallowing has returned, small quantities of wine, warm brandy and water, or coffee, should be administered. The patient should be kept in bed, and a disposition to sleep encouraged.

General Observations.—The above treatment should be persevered in for some hours, as it is an erroneous opinion that persons are irrecoverable because life does not soon make its appearance, individuals having been restored after persevering for many hours.

Appearances which generally accompany Death.—Breathing and the heart's action cease entirely; the eyelids are generally half closed; the pupils dilated; the jaws clenched; the fingers semi-contracted; the tongue approaches to the under edges of the lips, and these, as well as the nostrils, are covered with a frothy mucus. Coldness and pallor of surface increase.

Cautions.—Prevent unnecessary crowding of persons round the body, especially if in an apartment.

Avoid rough usage, and do not allow the body to remain on the back unless the tongue is secured.

Under no circumstances hold the body up by the feet.

On no account place the body in a warm bath, unless under medical direction, and even then it should only be employed as a momentary excitant.

SUSPENSORY BANDAGE.—The surgical appliance that bears this name is chiefly used for men, and consists of a silk network bag to contain one or both testicles, and by means of straps is attached to the belt that passes round the waist, keeping the parts suspended.

SUTURE.—A seam; the name given by anatomists to the joints by which the bones of the skull are locked together. There are two sets of sutures—the *false* and the *true*. The true sutures are three in number—the *coronal*, joining the frontal and parietal bones; the *lamboidal*, joining the parietal bones with the occipital; and the *sagittal*, uniting the two parietal bones. The false sutures are two in number—called the *temporals*,—one on each side, joining the temporal with the parietal bones. These sutures are sometimes called the squamous. The bones of the face have five sutures uniting them together.

The term suture is also applied to the stitches put into wounds by surgeons to draw together the edges of the cut or laceration, and are either *interrupted* or *continuous*: the first, when one or two stitches are used; the second, when she wound is regularly sewn up like a team.

SWALLOWING. See DEGLUTITION.

SWEETBREAD.—The name given in animals to the abdominal organ called in man the *pancreas.*

SYCOSIS.—An eruption of red pimples on the head and face. See SKIN, DISEASES OF.

SYMPATHETIC NERVE, OR GREAT SYMPATHETIC. — A nerve that, leaving the brain, enters into intimate connection with the whole system of ganglions scattered over the thorax and abdomen.

SYMPTOMS.—We have, under the article Signs, shown the difference between symptoms and signs, the one being regarded in the light of a character, and the other as a characteristic.

Though the symptoms of groups of diseases appear generally the same, there are special differences which the medical man knows to be peculiar to each. Symptoms do not merely point out the kind of the disease under which a patient may be labouring; they also enable the physician to draw his prognostic whether the disease is likely to terminate favourably or the reverse. Some symptoms, and often those which escape the notice of ordinary observation, are to the man who thoroughly understands his profession the most intelligible and satisfactory, as giving him insights into unexpected mysteries and complications. Sometimes a physician is obliged to ignore scientific treatment, and apply his remedies to combat particular symptoms; this is called treating a disease symptomatically.

SYNCOPE.—Fainting, which see.

SYNOVIA.—A thin, glairy fluid, the oil of the joint, secreted in the capsular ligament of each articulation, for the lubrication of the bones of the joint.

SYPHILIS. See VENEREAL DISEASE.

SYRINGE.—An instrument to inject lotions or washes into the ears or wounds, and used for other purposes. There are two kinds of syringes—the male and the female.

SYRUP.—A syrup is an infusion or the juice of a fruit saturated with sugar, and then boiled down to a concentrated thickness. The most important of the syrups are those of squills, tolu, white and red poppy, buckthorn, and saffron.

SYSTOLE. — The contraction of the ventricles of the heart. See DIASTOLE, and HEART.

T

T is the twentieth letter of the alphabet, and was anciently used as a numeral—T signifying 160, and with a dash over it (thus, $\bar{T}$) 160,000.

T-BANDAGE.—A peculiarly shaped bandage, used for suspensory purposes, and named after its fancied resemblance to the letter T. The T-bandage consists of a double-headed roller, to the centre of which one or two tails are sewn: the length of the transverse portion and of the one or two tails must in all cases depend upon the part of the body to which it is applied, and the character of the organ to be supported. See BANDAGE.

TABASHIER.—A siliceous fluid, found in the joints of the East Indian sugar-cane, and regarded in the East as a medicinal agent of considerable importance.

TABES.—Consumption; a wasting of the body, characterized by emaciation and weakness, and attended by hectic fever and the usual colliqual or night sweats and cough.

TABES MESENTERICA.—A wasting or consumption of the mesenteric glands; or, more properly, a morbid state of those glands, in consequence of which, the chyle is prevented reaching the thoracic duct to supply the heart with new blood; the emaciation of the body, and all the subsequent symptoms of the disease, being manifested from that cause. Tabes mesenterica is a sure sign of a scrofulous constitution, showing itself in early life, as this is strictly a disease of childhood.

The SYMPTOMS begin with general lassitude, loss of appetite, and a relaxed state of the bowels, followed by pallor of the face and body, and a constantly increasing emaciation; the limbs become extremely thin, the flesh feeling loose and soft; the abdomen becomes swollen and hard; the eyes appear larger than natural, and the countenance anxious; the water is scanty and high-coloured, and the evacuations white, or of a clayey yellow. Sometimes the appetite is ravenous, or alternates between a loathing of and excessive desire for food; the thirst is often very great, and towards night there are always well-defined symptoms of fever.

The TREATMENT consists in relieving the oppressed glands, correcting the state of the stomach and bowels, and restoring tone to the mesenteric organs and · the system generally. Where the pain of the abdomen forms a troublesome symptom, a few leeches or a counter-irritant may be applied, in the form of tartar emetic ointment rubbed over the surface, till a crop of pimples is induced. In general, however, the following powders, mixture, and applications will be found sufficient. Take of—

Carbonate of soda . .	36 grains.
Powdered rhubarb . .	24 grains.
Grey powder	18 grains.

Mix, and divide into twelve powders for a child of three or four years old; into nine for a child from four to six years of age; and into six powders for a patient from six to twelve years old,—one powder being given in each case night and morning.

Mixture.—Take of—

Hydriodate of potass .	½ drachm.
Infusion of quassia . .	5½ ounces.
Syrup of saffron . . .	½ ounce.

Mix: a teaspoonful to be given with each powder to a child of from three to four years of age; a dessertspoonful to one from four to six years old; and a tablespoonful to a child from six to twelve years. In addition to the above, a dose of the following mixture is to be given every day at noon. Take of—

Mucilage	2 ounces.
Castor oil	1 ounce.

Make an emulsion, and add by degrees—

Mint water	3½ ounces.
Spirits of nitre . . .	2 drachms.
Syrup of orange peel .	2 drachms.

Mix, and give a teaspoonful, a dessertspoonful, or a tablespoonful, according to the above ages. A light, nutritious diet of bread and milk or farinaceous food, with a little boiled mutton for the dinner, is to be adopted as a general regimen, but no hard, salt, or solid food must be permitted on any account; and as regards a beverage, the child should be supplied with skimmed milk or whey in quantities sufficient to appease the thirst.

Change of air, with exercise, is indispensable to the cure, together with a daily sponging of the whole body, particularly of the abdomen, in tepid salt water; and after a thorough drying, a well-sustained friction with the hand over the legs, hips, and belly is to be continued for several minutes. When the evacuations show that the bile is performing its duty, the tumefaction of the belly subsides, and the appetite becomes more natural, either small doses of quinine should be given night and morning, or from 10 to 20 drops of the muriated tincture of iron administered in sugar and water every six hours.

TABIES. See TABES (Consumption).

TÆNIA.—A ribbon or fillet; the name given by physicians to the long, flat parasite known as the tapeworm. See WORMS.

TALC.—A foliated magnesian mineral, of an unctuous feel, used for drawing lines and diagrams on wood, cloth, &c. Talc is a laminated substance, like mica; talc-slate consists of talc and quartz arranged in laminæ.

TALIACOTIAN OPERATION.—A name applied to the operation of making a new nose, and derived from Taliacotius, a celebrated Chinese surgeon, who flourished about the beginning of the Christian era, and was the first who ever attempted to restore a lost nose. This he effected by cutting a pear-shaped piece of cuticle from the patient's arm, all but the apex or pedicule; the edges of the wings of the nose adjoining the cheeks were then made raw by scarification, the new skin spread over the nasal bones, and an artificial bridge (when the natural septum was destroyed), and either retained by adhesive plaster or by a few fine stitches; the arm was then bound up to the head and tip of the nose, that the circulation might be continued through the reflected piece of skin till adhesion had taken place round the raw edges; the apex of the skin was then divided, and the arm set at liberty, while the point was brought down in front to cover the bridge and divide the space into two nostrils, the upper part of the lip being scarified to allow of the union of the apex of the removed skin. When the patient objected to supply his own cuticle, Taliacotius was in the habit of procuring the needed integument from some substitute, cutting the required cuticle from the arm, leg, or buttock, that it might agree with the natural texture and colour of the patient's complexion, so that the new nose might justly harmonize with the other features. The late Dr. Liston was the first of our modern surgeons who revived this long-neglected operation; he, however, was in the habit of taking his integument from the patient's forehead, inking out the exact outline in the first case, and then with a scalpel dissecting it from the cellular tissue of the frontal region, all but a mere footstalk or narrow isthmus, sufficient to make the excised portion maintain its vitality till the adhesion took place, when, as in the former case, the pedicule was cut, and the piece laid flat, and, as surgeons say, *in situ*.

TALPA.—The name of a small encysted tumour of the head.

TAMARIND.—The preserved fruit of the *Tamarindus Indica*, a pleasant acid fruit, a native of the East and West Indies and Arabia, and used in medicine as a laxative and refrigerant. The pulp of the tamarind acts on the bowels like stewed prunes when taken in sufficient quantity, and makes a mild and agreeable purgative; it is principally employed, however, to make a cool, refreshing drink in fevers, the pulp being either dissolved in boiling water, strained, and set aside to cool, or it may be prepared with barley water, treated in the same way, and, when cold, given as a diluent or beverage. See DRINKS.

TANNIN.—The name given by chemists to the astringent principle of oak bark, and, indeed, of all astringent vegetables. Tannin is found more or less in all vegetables; it is this principle in the gall-nuts which, coming in contact with iron, strikes the black in the manufacture of ink. It is this substance, extracted from the oak bark, that thickens the skins of animals when immersed in it, and converts the green hide into leather: hence its name of tannin. Tannic acid is the only preparation of this principle in use medicinally, and is obtained from gall-nuts by means of sulphuric ether.

From its strong astringent properties, tannic acid is sometimes given in cases of internal hæmorrhage, severe diarrhœa, and sometimes as a gargle in relaxed sore throat, in the proportion of 30 grains of tannic acid dissolved in 6 or 8 ounces of water.

TANSY.—A well-known, aromatic, bitter garden plant, formerly in great request as an emmenagogue, and for pains in the stomach and bowels, the result of flatulence or colic, but now only occasionally employed in the treatment of worms.

TAPEWORM.—*Tænia*. See WORMS.

TAPIOCA.—A fine flour or starch, prepared, like sago, from the pith of the root of the cassava, a plant native of South America. The roots, when dug up, are cleansed, and then finely scraped, the pulp being treated with cold water to separate the acrid, poisonous juice that is abundantly diffused over the whole plant; the pulp is finally rubbed through a sieve, which gives it the rough, uneven, granulated appearance, like crumbs of stale bread, the whole being dried in an oven, and then packed in boxes for exportation. Tapioca forms an excellent farinaceous food, and can be made into custards, puddings, or cakes, or in any form proving a light and useful food for invalids.

TAPPING.—The popular name for the operation known to surgeons as *paracentesis*. The operation of tapping is only performed when it is necessary to relieve some internal organ by drawing off the fluid or water that surrounds and oppresses it, as in dropsies of the chest and belly, and sometimes in cases of water on the brain. In the first two instances an external incision is made through the cuticle, either in the central line of the abdomen, or along the upper margin of one of the ribs, when an instrument like a small bayonet, covered with a silver tube, called a trochar and cannula, is thrust into the cavity; the trochar is then withdrawn, leaving the tube or cannula in the wound, through which the fluid flows into a vessel held to receive it. For tapping the head the operation is somewhat different, but in all three cases a surgeon only can perform the operation.

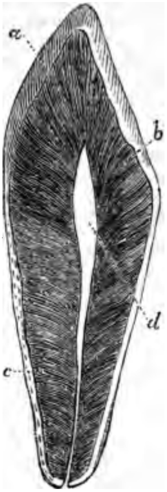
TAR.—A thick, black, unctuous mass, with a strong empyreumatic odour, obtained from the pine tree after the extraction of turpentine and rosin.

The following are the steps pursued to obtain the various products of this valuable tree. In the spring the woodman denudes the pine of its bark up to a certain height, a round hole is then drilled into the heart of the stem a few inches from the ground, through which the sap of the pine pours into vessels placed to receive it: this is the common, impure turpentine, which is then placed in an iron still, and the spirits of turpentine, or the purified article, drawn off; a thick, tenacious residue, however, is left at the bottom of the still, which on cooling becomes hard and brittle, and of a yellow colour, and known as "rosin." When all the sap has run out of the tree, and no more turpentine can be procured from it, the pine is cut down, sawn into proper lengths, and then split into billets of the same size and length; these are then built up in the form of a wall, with one end overlapping a tank, previously built in the earth; a fire is next lighted at the other end of the billets, which soon catching the wood, burns steadily inwards, till the whole pile is consumed. As soon as the one end of the billet becomes ignited, the thick sap of the wood is forced out through the pores of the opposite extremity, and running down, is collected in the tank; this dark, unctuous substance, on cooling, is the well-known article tar. If equal quantities of tar, water, and coarse rosin are boiled together, we obtain the substance known as pitch. Tar has been for many ages a popular remedy in cases of asthma and all bronchial affections; and as a stimulant in the form of ointment, has been used in obstinate cutaneous diseases; and when spread on paper, under the name of the Poor Man's Plaster, is often applied to the chest as a rubefacient, in cases of dry, hard coughs and colds. A preparation of tar and suet, professionally known as tar ointment (*unguentum picis*), was formerly much in vogue in ringworm and such diseases; it is now, however, seldom employed, the only preparation in use being tar water, made by occasionally stirring together for seven or eight days 1 ounce of tar with 1½ pint of water, and then straining the liquid. The dose of this preparation is a wineglassful every four or six hours, either taken alone or with milk. Tar water is sometimes used as a wash in skin diseases, and for purposes of inhalation, and sometimes as a disinfectant, also in cases of asthma.

When so employed, it should be boiled for a few minutes in the open air, adding from 1 to 2 ounces of subcarbonate of potass, dissolved in a little water, to each pound; this mixture is to be placed over a spirit lamp in the sick-room, keeping up a heat which disengages the volatile part of the tar. If a white vapour arises the heat is too strong, or the tar is impure. The air of the chamber soon becomes impregnated with the vapour of the tar. This process should be repeated two or three times a day, for half an hour each time. The same tar may be used until it becomes thick.

TARANTISMUS (from *Tarantula*).—The name of a peculiar venomous ash-coloured spider, speckled with white or black or green spots, and which is said to be found in greater numbers in Naples than in any other locality in Europe. The bite of this insect produces a disease analogous to St. Vitus's dance, and sometimes attended with madness. Such is the state of the nervous system under the poison of the tarantula, that on the hearing of music, the patient is seized with an uncontrollable desire for dancing, in which he continues with wonderful persistency till nature is totally exhausted by the exertion, and he falls to the ground insensible, and overcome by a profound coma. From this, as from an apparent sleep, he awakens cured. Music is consequently regarded as the only remedy for this singular disease, though of course it is the violent perspiration induced by the muscular exertion that is in reality the true curative agent, the music being merely the exciting stimulus to the cause.

TARAXACUM, or *Taraxacum Dens Leonis*.—The botanical name of dandelion, or Lion's Tooth herb, one of the most universal of all our wild plants and flowers, and, as a deobstruent and diuretic, one of the most useful of our native simples. For the indigestion consequent on an obstructed liver, dandelion, either eaten raw or as a salad, or taken in decoction of the cut roots, will be found most beneficial. As a corrective, boiled with liquorice root and sassafras, and accompanied with an occasional blue or Plummer's pill, it forms a diet drink hardly second in its efficacy to the decoction of sarsaparilla. It is, however, as a diuretic in cases of dropsy that this plant is more particularly employed. Indeed, so highly is it esteemed as a corrective and purifier of the blood, that homœopathic preparations of it are made for the purposes of a beverage for tea or breakfast. The Pharmacopœia contains three preparations of this article,—the decoction (*decoctum taraxaci*), made by boiling 1 ounce of the cut roots in 1½ pint of water, down to 1 pint; the dose being a cupful three times a day, or every four hours: the extract (*extractum taraxaci*), which is merely the expressed juice evaporated to a proper consistency; the dose of which is from 10 to 30 grains, either in pills, twice a day, or rubbed down with a wineglassful of warm water: and lastly, the juice (*succus taraxaci*), made by mixing 3 parts of the expressed juice with 1 part of spirits of wine, the latter being added merely to keep the liquid from fer-of teeth to be placed at the breast and fed on suction. The teeth which nature first places in the child's mouth are in every respect temporary, being small, soft, and imperfect, but admirably adapted to the circumscribed dimensions of the child's jaws; the second set, however, are meant to be permanent, and are only developed as the capacity to receive them is supplied, and this is never till the stature of the body has attained its fullest dimensions. The teeth are small conical bones, fixed in the jaw in the manner of a nail in a board, some having one fang or point, and others two and three, according to the order to which each belongs.



SECTION OF AN INCISOR TOOTH.

a. The Enamel. *b*. The layer of Ivory. *c*. The Bone of the tooth. *d*. The pulpy cavity.

The teeth are developed in the jaws, each one lying on its side in a small cell or case in the base of the jaw, where it gradually expands from a small ivory-looking seed into a minature tooth, which slowly advances upwards out of its case, pressing on the surrounding gum with one of its sharp edges, and causing the gum to become absorbed, till finally merely the delicate covering of the mouth prevents its bursting through; eventually this gives way, and the edge of the tooth makes its appearance, each tooth revolving on its axis, and after a few days standing straight up in the gum.

Each tooth consists of three parts,—the white external coating, called the enamel; a layer of a close, darker substance analogous to the ivory of the thick-skinned or *pachydermatous* animals; and the inner part, or bony framework. From below the crown of the tooth to the extremity of the fang, a narrow longitudinal cavity passes through each tooth; through this channel enters the artery, nerve, vein, and lymphatic, which supplies every tooth with nourishment and sensation. The perfect set of a child's teeth consists of 20, and of an adult's, of 32, 16 to either jaw.

The following shows the manner in which the teeth usually make their appearance.

FIRST SET, MILK OR DECIDUOUS TEETH.—The twenty teeth which compose this set, though by no means regular in the period of their appearance, may be regarded as showing themselves in the following order:—

About the fourth month one of the middle incisors of the lower jaw makes its appearance, succeeded by the corresponding tooth on the upper jaw; after this the companion incisor of the lower jaw, and its opposite tooth in the upper; thus the four cutting teeth are usually developed first, and between the fourth and the eighth months. Between the seventh and tenth month the four side teeth, two on each side, are usually cut; and between the twelfth and eighteenth months the four single grinders, two on each side. Four spaces are still left in the child's gums to be filled up, two in each jaw, between the incisors and the side teeth; these, between the eighteenth and twenty-second month, are usually filled up by the four canine or eye teeth; and last of all the space at the back of the jaw is closed by the four back grinders, a completion which is seldom effected before the thirty-sixth month or third year; in some children, however, the process is not completed till the fifth year.

The child has thus—

Incisors	4
Side teeth	4
Single molars	4
Canine	4
Back molars	4
Total	20

The period at which the PERMANENT TEETH appear is so irregular, that no reliable table can be given of their order; in general, however, the molars are developed before the incisors are reproduced; the back molars, called the wisdom teeth, being seldom cut till after twenty-four years of age, and in some instances they are so late as thirty years. The set consists of—

Incisors	8
Cuspidati, or eye	4
Bi-cuspidati, or canine	8
Multi-cuspidati, or molars	8
Back molars, or wisdom	4
Total	32

The main artery that supplies the teeth enters the substance of the jaw by a foramen, and sweeping round the chin below, and to the centre of the upper lip in the jaw above, sends off a small filament to the fang of each tooth, which ascends through the cavity already mentioned to supply the organ with nourishment; a nervous twig accompanies each artery, and a vein and lymphatic descend from the centre of each tooth by the side of the artery and nerve.

TEETH, DISEASES OF.—Most of all the maladies that affect the teeth proceed either from inattention to the state of the bowels and stomach, or from want of cleanliness in regard to the teeth themselves. The daily use of the tooth-brush, with or without tooth-powder, and the occasional employment of an aperient medicine, will, if persevered in, more effectually secure a healthy state of the teeth than any more elaborate course of treatment can effect. The chief disease to which the teeth are liable is decay, partial or complete—necrosis of the bone, and this usually commences from neglect of cleanliness, from leaving fragments of meat or vegetables between the teeth, where they soon ferment and generate an acid, which, acting on the enamel, gradually corrodes that substance, and spreading to the soft bone below, soon involves that structure in the same condition, till eventually an entrance is eaten into the inner cavity, when the cold air gaining admission to the enclosed nerve, or the food from the mouth finding its way to the exposed filament, induces, by the irritation and often inflammation excited, those sudden plunges and agonizing pains which indicate what we call toothache. See TOOTHACHE and TOOTH-POWDER.

Neuralgia of the teeth from cold is by no means an unusual affection, and may affect the whole set, or only one jaw, or but the half of one jaw, or the one side of the head. In such cases the treatment laid down in tic-douloureux must be followed as far as necessary.

TEETHING, OR DENTITION.—This natural process commences much earlier in some children than in others, sometimes beginning as early as the second month, in others not till the eighth, ninth, or twelfth, though as a general rule it commences about the sixth month; but whether late or early, the process is always a dangerous one for the child, so great is the nervous disturbance caused to the system.

From the time the germs of the teeth begin to start from their bony cases to their appearance through the gums—or what is called the breeding of the teeth—is generally from two to three months. The latter stage of this process is indicated by the increased restlessness of the child; an abundant flow of saliva, known to mothers as drivelling; the gums are hard, hot, and swollen; the child pushes its fingers into its mouth in its vain endeavours to relieve the pain endured by pressure or scraping; the body becomes hot and feverish; and if the gums are very resistant the lungs may become affected, or the brain itself influenced in a serious degree, inducing water in the head, and not unfrequently convulsions, in which at any moment the infant may expire.

The irritation often brings on diarrhœa, which, when slight, relieves the head, and need not be interfered with; but when excessive, may carry off the patient by the exhaustion it causes, if not arrested in time.

TREATMENT.—To allay the heat and irritation of the body consequent on difficult and painful dentition, a little cooling aperient medicine, with the warm bath, is almost all that is necessary; for this purpose a little grey powder and magnesia, given according to the age, for infants when under eight months, are the best means; or a little magnesia, followed by a small quantity of manna, scraped down and dissolved in a spoonful of warm water. When the child is older, a few spoonfuls of senna tea, with 20 grains of sulphate of potass, will answer the purpose equally well. As a general rule, the gums should only be scarified when the edge of the tooth is plainly felt below the finger; sometimes, however, the capsule in which the tooth is enclosed is so firm, that till it is divided the tooth cannot possibly advance; in such cases it is necessary to cut down through the gum, divide the capsule, and allow the tooth to escape, if the surgeon would save the child from a probable fit; in all cases, however, the gum is first to be cut lengthways along the top of the tooth, and then transversely across the tooth, making what is called a *crucial* incision; this prevents the wound healing till the tooth has come through. Many children break out about the neck, face, and behind the ears, with irritable running sores, all the time of their dentition; care must be taken not to heal these too suddenly, and in some cases not to heal them at all, or till after the cutting of the full set; indeed, it is sometimes necessary, to relieve the head, to establish a running sore of this kind by a small blister behind the ear. In all cases children should be supplied with a roughened coral, or a bone ring, cut with diagonal lines like a file; this the child either rubs along its gums or bites upon, in either way affording relief by removing the fine tough film or membrane investing the gums. The mother may also from time to time scrape the infant's gums with the edge of her nail, a process that always affords relief and gives the little patient pleasure. In all cases the mother and nurse should remember *that the warm bath is a never-failing source of relief and benefit in teething, and may be employed at any time and under all circumstances.* See Advice to Mothers, and Infants.

TEGUMENT.—The skin, the covering of the body. This, as far as the texture and functions of the cuticle are concerned, we have already disposed of under Skin, which see.

There are some remaining portions appertaining to that organ, and which properly deserve the name of tegument, to be yet mentioned. Of these the nails and hair are the most important, the former being mere lamellated and thickened extensions of the cuticle or scarf-skin, and, like that tissue, insensible; the latter, like bulbous reeds, spring from special glands, from which they grow, and by which they are nourished, each hair as it pierces the *cutis vera* being surrounded by a sheath, or process of the scarf-skin, or cuticle proper.

The diseases to which the nails are most liable are *onychia*, or whitlow, nails growing into the flesh, ecchymosis beneath the nail, absence of all nails, supernumerary nails, tumefaction, curvature, and falling off of the nails. In most of these affections, poulticing for a longer or shorter period is always necessary, so as to soften the nail, and allow of its being cut away; this, with the occasional use of caustic, is the only means employed to counteract these painful affections. The principal affection of the hair is baldness, and this can only be corrected while the glands of the scalp remain in perfect action. See Hair, Skin, and Baldness.

TELA.—A web, a term sometimes applied to the cellular membrane.

TELLURIUM.—A metal of a colour resembling a mixture of tin and silver.

TEMPERAMENT.—This is a term used by physiologists to distinguish a peculiar organization of the system common to certain groups of individuals, and which serves to define one individual or group from another. Physicians generally recognize four temperaments,—

1st. The sanguine, characterized by plumpness of body, with tolerable firmness of the flesh; the hair is red, or of a light chestnut, the eyes blue, and the complexion fair and florid, with a soft thin skin. Such persons have large bloodvessels, an active circulation, and a full, quick pulse; the body is active, the countenance animated, the passions excitable, and the mind volatile but unsteady.

2nd. The phlegmatic is distinguished by a round body, soft muscles, fulness of the cellular tissue; the hair is fair, the eyes light blue or grey, and the skin pallid. The bloodvessels are small, the circulation languid, and the pulse slow. All the functions mentally and bodily are torpid.

3rd. The bilious. This temperament is defined by a moderate fulness of body, with firm, hard flesh, and strongly defined outlines of person. The hair is black, the eyes and complexion dark, the pulse is full, firm, and of moderate quickness, and there is great energy both in body and mind; and, in conclusion, the features are strongly marked, bold, and prominent.

4th. The Nervous. This is characterized by a small, spare frame, slight muscular development, quick, impulsive movements, pallid countenance, and delicate health. The pulse is small and quick, and easily excited by mental emotions or nervous impressions; the whole nervous system is active, the senses acute and keen, the thoughts quick, and the imagination lively.

Though these temperaments are seldom found occurring in a pure form, they are sufficiently defined to be easily recognized; they, however, supply us with the following general facts, namely, that the *sanguine* temperament is most liable to acute inflammatory diseases, the *phlegmatic* to scrofulous complaints, the *bilious* to affections of the liver and the digestive organs, and the *nervous* to mental disorders and diseases of the nervous system generally.

TEMPERATURE, THE, of the human body is 97° of Fahrenheit, but owing to the evaporation always taking place from the surface by perspiration, it is able to endure a temperature as high as 260°, and even to sustain with impunity the heat of an oven at 500°. See SKIN.

TEMPLES.—The anterior lateral portions of the skull, as represented by the temporal bones,—so named from *tempus*, time, because it is on these localities that the evidence of time or age, grey hairs, first show themselves. The temporal bones are divided into two portions, the thin portion, or *squamous*, and the hard or stony part, known as the *petrous;* in the latter is situated the passage of the ear, and all the bony portions appertaining to the organ of hearing. The muscle, artery, vein, and nerve of this region all receive the one name of temporal.

TENACULUM. — A sharp-pointed, crooked instrument used by surgeons to transfix and pull out bleeding arteries which require to be tied.

TENDO ACHILLIS.—The longest tendon of the body, and the great leverage of the heel, it being the tendon of the extensor muscle of the leg. See ACHILLES, TENDO.

TENDON.—The white, glistening bands or cords, commonly called sinews, which are continued from both ends of muscles to attach them to the bones; the upper tendon, which is the shortest, forms the head, or the fixed point of the muscle's origin; the lower, and longest, its insertion. Sometimes the tendons are torn or ruptured. See FRACTURE.

TENESMUS.—A continuous and painful sensation of the rectum, a constant straining and attempt to empty the bowel with no result. This very distressing pain is a symptom or an effect of diarrhœa or dysentery. Sitting on a vessel filled with hot water for a few minutes has been recommended for this exhausting complaint, but the best and most expeditious remedy is a suppository of 3 or 4 grains of soft opium passed up the rectum, the patient assuming the recumbent position till the opium begins to act.

TENSOR.—The name of some muscles whose action is to stretch or make rigid some part. One of the most important is the *tensor vaginæ femoris*, or the muscle that stretches the thigh and adjacent parts.

TENT, TO.—To stop up. A tent is some surgical application inserted into a wound, either to stop a hæmorrhage from a torn vessel by applying pressure immediately over the aperture in the artery, or else to dilate a wound without cutting, to allow the free escape of pus, a bullet, or some foreign body. A tent generally signifies a small roll of soft lint inserted into a sinus, punctured wound, or ulcer, to keep it open. The proper tent for these latter purposes is, however, made in a very different manner. A smooth slice of agaric, or of the best sponge, is to be cut of the required thickness. The article selected is then to be well washed and dried, and thrown for a few minutes into a quantity of melted simple cerate, or basilicon ointment; when completely distended and thoroughly charged with the liquid ointment, the piece of sponge or agaric is to be taken out and laid between two slabs, with a heavy weight sufficient to express all the grease. When cold, the tent, which will be reduced to the thinness of paper or pasteboard, is to be trimmed with a sharp knife, and cut into slips of two, three, or four inches, or to sizes to fit the puncture or sinus into which one of the pieces is to be passed. As the heat of the part melts the wax or resin of the ointment that binds it together, the sponge gradually expands, forcing open the wound, which, on each dressing, is supplied with a thicker piece of tent, till the part is dilated sufficiently for the surgeon's purpose.

TEREBELLA.—One of the implements forming the set of trephining instruments; a small circular saw, like the top of a patent corkscrew, used for sawing circular pieces of bone from the skull during the operation of trephining.

TEREBINTHINÆ. — Turpentine, which see.

TERES.—Round. The name of two muscles of the arm, the *teres major* and *minor*, which, springing from the scapula, are inserted into the *humerus*, and move the arm in several directions.

TERMS.—A popular mode of expressing the periodical discharge from the uterus. See WOMB, and other headings.

TERRA.—Earth.

TERRA JAPONICA, OR JAPANESE EARTH.—The name given to the liquid extract of catechu.

TERTIAN. — An intermittent fever occurring every seventy-two hours, or third day, with a clear intermission of forty-eight hours. See AGUE, and INTERMITTENT FEVER.

TEST.—A term used by chemists for those articles which have the property of demonstrating the existence of another substance; thus starch will always indicate or detect iodine, in whatever manner it may be combined, by the blue colour it strikes with it; and iron will reveal the presence of tannin by the inky black it produces: such articles are called tests.

TESTA.—A shell. *Testæ preparatæ*, prepared shells, or prepared chalk. See CHALK.

TESTES CEREBRI.—A name given by anatomists to two small elevations of the brain, so called from their fancied resemblance to—

TESTIS.—The testicle. The testicles are so called because they testify or witness to the sex, and are two oblong glandular bodies, situated one in each *scrotum*, and are the great seminal springs of the male. Unlike most secreting organs of the human body, which are conglomerate masses, made up of an immense number of granules of the same shape and character, the testicles are mere convolutions or rollings up of the attenuated spermatic cord, each organ being capable of being unravelled into several hundred yards of length. The testicle, in fact, is but the convoluted or rolled-up extremity of the spermatic vessels, from the opposite end of which proceeds the duct or tube called the *vas deferens*, which carries from each testicle the fluid secreted in the organ, with which it proceeds under the bladder, receiving, as it passes, the duct from the *seminal vesicle*, and with its fellow of the opposite side, terminating in the bulb of the urethra, from which, by the muscles round the rectum, it is at the proper moment propelled forward. See BLADDER, CUT OF; and SPERMATIC CORD.

From their exposed position the testicles are liable to many accidents, which, from their highly organized state, renders them, when injured, excessively painful. Inflammation, swelling, and sometimes effusion is the consequence of such accidents as kicks, bruises, falls, &c., and requires very prompt treatment by rest, *hot fomentations*, or leeches and cold lotions, the use of a suspensory bandage, and by the internal employment of calomel and Dover's powder. For the special diseases of this organ—hydrocele and others—see the diseases themselves.

TETANUS.—We have already, under Locked Jaw, described some of the fearful results of this state of rigid spasm, known generally as tetanus, that term being strictly confined to one phase of the five conditions understood by the name of tetanus. Those five are—*trismus*, or spasms of the muscles of the mouth and throat, or lock-jaw; *opisthotonos*, a contraction of the posterior muscles of the body, bending the trunk in an arch backwards; *emprosthotonos*, where the spasm forcibly bends the trunk forwards; *pleurosthotonos*, when a convulsion seizes either the muscles of the right or left side, and violently arches the body to the right or left side; and lastly, *tetanus* proper, where every muscle of the body is seized with one universal contraction; the body, in consequence of both sets of muscles being affected, remaining perfectly straight.

Strychnine has the singular property, when taken in doses of poisonous quantity, of inducing each and all of the five conditions of tetanus; on this account, it has been employed as a remedial agent in the disease when naturally induced, strychnia, with the hot bath, opium, and electricity, being the most reliable means we possess of overcoming the rigid spasm that characterizes this formidable disease, which can only be effectually treated in an hospital.

TETTER.—There are two varieties of this cutaneous disease, one the *dry tetter*, the other the *running tetter*, each belonging to a different genus in the diseases of the skin; the latter appertaining to the order of pustular eruptions, and the former, the most general, to that of the scaly or *squamous*.

The *treatment* in dry tetter requires a farinaceous diet, mercurial purgatives, such as grey powder and rhubarb, with sulphate of potass or bicarbonate of potass, two or three times a day, the warm bath, and, in severe cases, the hydriodate of potass. See SKIN, DISEASES OF. The wet sheet, or cold-water cure, is often of signal benefit in this order of cutaneous diseases. See HYDROPATHY.

THALMI NERVORUM. The name of two prominences situated in the lateral ventricles of the brain, the commencement of the two optic nerves.

THEBAICA.—An old medical name for opium; *tinctura thebaicæ*, laudanum.

THEINE.—An active vegetable principle, extracted from tea.

THERAPEUTICS.—The science of therapeutics, as the name implies, treats of the cure and palliation of diseases. In its widest sense it comprises all knowledge which has an immediate bearing upon this important object—the knowledge of disease on the one hand, and of the virtues of remedies on the other.

The application of this knowledge in individual cases constitutes the *art* of healing. There is a general and special therapeutics, but as this subject is too theoretical for a work of this nature, we must be content with leaving it unbroached, and satisfy ourselves with merely stating what the science professes to be.

THERIACA.—Treacle; a thick, tenacious, dark-coloured syrup or electuary; a medical compound given as an antidote against poisons, and to cure the bites and stings of animals, venomous insects, and reptiles.

THERMÆ.—Hot or warm baths.

THERMAL SPRINGS.—Hot saline springs or spas. See Waters, Mineral, or Spas.

THERMOMETER.—A scientific instrument for measuring the amount of heat in the atmosphere, and the proportion of free caloric contained in all bodies. Several instruments for the same purpose, but arranged upon different scales, are in general use over Europe. That adopted in this country is the meter invented by Fahrenheit, whose name it bears, and, like the others, is composed of a thin glass tube, with a bulb filled with mercury, the length of the tube being graduated to correspond with a card divided into scales or degrees, the starting point being marked at 32, zero, or freezing point, and the maximum or top 212, the boiling point of water. The intermediate space is equally divided into degrees, with four particular indications,—temperate, summer heat, blood heat, and fever heat.

THIGH.—The first portion of the lower extremity, which extends from the hip joint to the knee, and consists of the *femur* or thigh bone, and the muscles, nerves, vessels, and integuments which surround and cover it. For the injuries to which the thigh is liable, see Fracture, Rupture, and Wounds, which, from the position of the artery, are often dangerous when they occur in this locality.

THORACIC DUCT.—The name given by anatomists to the great nutrient trunk of the body. This vessel, which rises from the *receptaculum chyli*, behind the abdominal viscera, runs up through the abdomen and thorax, at the side of the spinal column, till it reaches the seventh cervical vertebra, when it turns and terminates in the right subclavian vein, its contents being carried by the *descending vena cava* to the right auricle of the heart, to be converted by the oxygen of the air in the lungs into new arterial blood, and thus replenish the waste of the body. See Absorption, Digestion, Chyle, &c.

THORAX.—The chest, the upper part of the trunk, the bony case in which are contained the organs of respiration and circulation. The thorax is bounded above by the neck, and below by the abdomen, being cut off from the first by the clavicular bones and the pleura, and from the second by the diaphragm. The thorax is composed of the twelve dorsal *vertebræ* behind, the sternum and its ensiform cartilage in front; by the seven true and five false ribs on either side; and shut in and surrounded by the intercostal and spinal muscles, and the usual bloodvessels, nerves, lymphatics, and integuments; and in the female by the mammary glands. Within, the thorax is lined throughout, and all its organs invested, by a thin serous membrane, called the pleura, a shut sac, the same as the Peritoneum, which see.

The thorax contains the heart and its bag, the *pericardium*, the lungs, part of the windpipe, bronchial tubes, the aorta, and the two great veins, the *venæ cavæ;* besides these, it gives passage to the gullet, the thoracic duct, and several important nerves, and in the fœtus to the thymus gland.

THORN-APPLE (the *Datura stramonium.*)—The medical properties of this article, and the uses to which the plant is now put, have been already explained, under the name by which it is most generally known, Stramonium, which see.

THREAD-WORMS.—See Worms.

THROAT.—This term, though used vaguely to express the whole neck, from the base of the skull to the top of the thorax, is in general employed merely to designate the two passages of the gullet and the windpipe.

The diseases and accidents to which these parts are liable have either been already treated, or will be so, under their respective heads. Inflammation, sore throat, croup, and diphtheria, the most important, will be found in their proper places.

THROAT, PUTRID SORE.—The symptoms of this disease are in its earlier stages precisely analogous to those of typhus fever, with the addition of stiff neck, flushed face, red eyes, hoarseness, sore throat, nausea, thirst, vomiting, and sometimes diarrhœa. The tongue, mouth, gums, and fauces, as far as can be seen, are all of a vivid red colour. The redness soon deepens in colour, and in a few days the palate is covered with brown or black spots, the tongue with a thick, dark fur, and the inside of the mouth dotted with small vesicles, while a thin acid fluid oozes from the nose and mouth, corroding the places on which it falls. The pulse is small, weak, and irregular, and a scarlet eruption breaks out over the body, which, after a few days, disappears by desquamation, leaving the skin of a brown colour; a fœtid odour is exhaled from the mouth, and the body presents all the characteristics of a putrid or typhoid fever. Putrid sore throat and malignant scarlatina are now regarded as the same disease, being followed by the same *sequelæ* as scarlet fever.

The TREATMENT in this disease consists, in the first instance, in preventing the tendency to gangrene by strengthening the system by means of wine, tonics (such as quinine, ammonia, bark), and a nutritious diet; secondly, in promoting the separation of the sloughs from the throat by astringent and stimulating gargles and washes; and thirdly, in restoring the health of the patient after the dropsy that generally supervenes, by tonics, exercise, and change of air and scene.

THRUSH (*Aphtha*).—This, though considered as one of the juvenile diseases to which infancy is especially liable, is by no means unknown to adult age, and one which not unfrequently attacks both persons in mid-life, and those of very advanced years; indeed, there is a very popular belief, and one most potently credited by old women and nurses, that every person must, at some time between their birth and death, have an attack of thrush, and the longer the visitation is delayed, so much the worse is the patient's chance of recovery. Though thrush is a disease apparently confined to the mouth, it in reality extends along the whole alimentary canal; the *rectum* and *anus* being in most cases as thickly covered with minute ulceration as the lips and mouth. This fact will serve to explain why it is that infants suffer so severely under an attack of this disease; and why aged people so frequently succumb to the great constitutional disturbance it entails.

The SYMPTOMS or characteristics of thrush are great heat, thirst, and restlessness, followed after a few days, or only a few hours, by an eruption of small white specks or minute blains, either single, or very soon becoming confluent; these specks first appear on the tongue and gums, extending quickly to the lips, cheeks, palate, fauces, and uvula; and if the throat is more closely examined, descending as far as the eye can reach; the eruption in all probability advancing at once along the gullet, over the stomach, and so on, till the entire length of the bowels is equally visited. The first stage of this disease is not always evident to the sight, the original crop of minute pimples being too small to be noticed unless the finger is passed over the lips and cheeks, when the hard elevated pimples may be distinctly felt beneath the lining membrane. The second stage, or that of ulceration, is the condition described above, and the form in which the disease is first perceived. After a time a glutinous mucus is discharged from the centre of each aphtha, which forms a thick white crust adhering with the tenacity of glue to each, and eventually dropping off, but without leaving any indentation or eschar behind. There is from the first great difficulty to masticate or swallow, and the oppression at the chest and laboured respiration are most conspicuous; the breath is hot and feverish, and the evacuations unhealthy, crude, relaxed, and fœtid, and the water high in colour and scanty in quantity; the pain in the mouth during the course of the disease is always extremely trying and severe.

If the child should be suckling at the time, the mother or nurse must be very cautious in her diet, and take especial care to keep her nipples well washed and dried after each suckling, or she will soon have them raw and painful.

The TREATMENT for an adult in a case of thrush should commence with a warm bath, one of the following powders three times a day, and half an ounce of castor oil every morning or every second morning, with the employment of one of the following lotions, to be used as a gargle and wash for the mouth, twice a day.

Powders.—Take of—

Powdered rhubarb . .	30 grains.
Grey powder	12 grains.
Carbonate of soda. . .	30 grains.

Mix, and divide into six powders.

No. 1.—Take of—
. . . . 1½ drachm.
. . . . 2 drachms.
in water eight ounces. Mix.
l as a gargle twice a day.
No. 2.—Take of—
te of potass . . 1½ drachm.
vater . . . . 8 ounces.
nd use as above.
t in all cases must be light and
s, and the beverage of the most
scription. The treatment for
when the disease is slight, will
mand more than a little mild
uch as the powders prescribed
warm bath, and one of the above
ade of half the strength there
be used to wash the mouth, as
xplained.
—
ate of magnesia 30 grains.
red rhubarb . . 9 grains.
ate of soda . . 18 grains.
livide into nine powders; one to
twice a day to an infant from
eighteen months old. If the
nder twelve months, the above
are to be divided into twelve
nd given in the same manner;
. the child exceeds a year and
e above quantities are to be
to six or four powders, according
ngth and age.
of lint is to be securely tied
end of a penholder, and the
made dipped into either of the
lotions, weakened for the pur-
the child's mouth dabbed with
day. It is customary to pre-
mixture made with powdered
. honey, with which to smear
s mouth in thrush; but the
ticles of the borax so prepared
uch pain, that we consider the
l as a much more humane and
efficacious mode of employing
ng as the mouth is well wetted
tion.
he thrush is severe, in addition
of the warm bath, the employ-
e magnesia, soda, and rhubarb
nd of the lotion, the following
to be given to the infant or
six hours. Take of—
ge . . . . . 2 drachms.
oil . . . . . 3 drachms.
of potass . . 4 drops.
syrup . . . . 2 drachms.
. . . . . . enough to
make 2 ounces.
um . . . . 8 drops.

Mix, and make an emulsion. Half a teaspoonful to be given to an infant from six to twelve months old, a teaspoonful to a child from one to two years of age, gradually increasing the quantity up to a dessertspoonful for a child of six years old.

When the diarrhœa is severe, a few grains of the compound chalk powder—from 5 to 15 grains, according to the age of the child—may be given with benefit; or 10 grains of the aromatic confection, rubbed down with a dessertspoonful of water, may be taken for the same purpose. When the symptoms run high, and there is much fever, and the constitutional disturbance is severe, more active measures will be necessary; but what those should be must depend upon the symptoms that present themselves. Sometimes, but very rarely, the disease assumes a gangrenous character; when such is the case, wine, tonics, beef tea, and stimulants will be required to counteract the consequent debility; care, however, must be taken that the brown crust occasionally seen on the *aphthæ*, and caused by the escape of blood from the ulcerated surface, is not confounded with gangrene, as in that case such treatment would be highly dangerous. The new theory of Dr. Jenner, that *aphthea* is of vegetable origin, and depends upon a fungus growing on each ulcer, has done much to enlighten the profession on the history of this disease, while his discovery that sulphurous acid gas, generated by the saliva acting on sulphate of potass, destroys the vegetable growth, has enabled him to treat thrush with a degree of confidence and success hitherto unknown. When *aphthæ* appear during a chronic disease of long standing, they are regarded as a sign of a near and fatal termination.

THUS.—The resin called frankincense; a superior kind of rosin, of a yellowish-white colour, and now only used in the manufacture of varnishes.

THYME (*Origanum*).—A well-known aromatic culinary herb, which, from the large quantity of stimulating essential oil it contains, has been much used in medicine as an embrocation in cases of severe or obstinate sprains. The only preparation of thyme used in medicine is the oil (*oleum origani*), which, combined with hartshorn and oil, and turpentine, in equal proportion, yields a very strong and effective liniment.

THYMIOSIS.—Another name for the African disease, the yaws.

THYMUS.—The name of a small gland found in the anterior *medestina* of the thorax in the fœtal infant, but which as soon as respiration commences, collapses and rapidly disappears. Neither anatomists nor physiologists have yet discovered a satisfactory theory for the duty this organ performs in fœtal life; all that we really know of it is the fact that it is always present in the fœtus, and never in the adult, entirely disappearing a few weeks after birth.

THYROID, or SHIELD-SHAPED.—The name of one of the cartilages of the throat. The thyroid cartilage is the largest of all the pieces forming the larynx, or organ of voice. This cartilage is composed of two pieces, which, joining in front at a sharp angle, sweep round each side of the organ, forming what is called the wings, or *alæ;* it is the prominence in front, where the two side pieces join, which is known as the *pomum Adami,* or Adam's apple. The thyroid cartilage has an intimate connection, by various muscles, with all the other cartilages entering into the formation of the larynx, which receive such names as the *thyro-hyoideus, thyro-epiglottideus,* and *thyro-arytenoideus.* See DIGESTION, DEGLUTITION, *cut*, and LARYNX.

TIBIA.—The largest of the two bones of the leg, and with its companion, the fibula, completing the knee and ankle joint. Two muscles rise from the tibia, whose duty is to bend the tarsus, or ankle, and these are called the *tibialis anticus,* and *tibialis posticus;* the same name has also been applied to the artery and nerve of the part.

TIC-DOULOUREUX, or a painful spasm; a name given by French physicians to an aggravated condition of neuralgia, affecting the nerves of the whole or one-half of the face or head. The peculiarity of this disease is that it commences without a moment's warning, seizing on the nerves of the face with the most violent pain, and continuing for an indefinite time to torture the patient with the most excruciating agony, frequently terminating as suddenly as it came on, though sometimes gradually subsiding in its intensity. Branches of the 5th pair, or trifacial nerves, are the parts generally attacked, especially the *supra* and *infra orbital,* and the *maxillary* branch, and a line drawn from the centre of the eyebrow in a straight line to the lower jaw will cover the three points where the pain is usually felt most agonizing; a filament from each branch escaping *on to the face* by three small apertures,—one above the brow, the other under the orbit, and the third midway between the chin and the angle of the jaw. This most distressing disease generally attacks those whose digestive organs are faulty, selecting rather the weakly than the robust, and those whose constitutions have been much deranged by a long residence in a warm climate, and more particularly those who have suffered much from wounds and injuries to the head; in fact, whatever may have been the remote inducement, an unhealthy state of the stomach and bowels is in all cases the immediate cause of an attack of this disease; however much the nervous system may be or has been irritated, it is to some derangement of the bowels, or to the presence of some crudity in the stomach, that this dreaded enemy is to be attributed, which, as we have stated, may attack the patient without a premonitory symptom, may rack him for hours with a rigid spasm of the nerves and a convulsive twitching of the facial muscles, or it may only endure for a few minutes and not recur for weeks or months, or it may revisit him at every change of the wind to the east, or it may become periodical, and recur at regular intervals, like an ague.

THE TREATMENT.—In all cases where the pain can be endured for some time, to allow of the action of aperient medicine, the treatment should commence by giving one or two of the compound assafœtida pills, and if there is any acidity in the stomach, by ordering a draught composed of 30 grains of bicarbonate of potass, or carbonate of soda, dissolved in a wine-glassful of camphor water, with 1 drachm of the aromatic tincture; this draught to be repeated every six or eight hours if necessary. To promote digestion, when a want of tone in the stomach is regarded as an exciting cause, a teaspoonful of Gregory's powder, with 5 grains of colombo powder, should be taken in a little peppermint water an hour before each meal; at the same time, care should be taken to keep the skin clean and healthy by a warm bath, and the free use of the flesh-brush. When, as is sometimes the case, the state of the mouth and gums and the condition of the teeth is an exciting cause, the evil should be at once remedied; the teeth, if necessary, scaled, the decayed and irritating stumps removed, and a wash of borax and water, with tincture of myrrh, freely used with the tooth-brush to clean the teeth and gums. Such are the means and precautions which should be employed in the intervals of attack, or when the pain will allow of their being adopted, to prepare the body to resist a renewed attack of the disease. When, however, the paroxysm is on, and the patient almost distracted with his suffering, and there is no time to wait for the action of the aperient medicine, relief to the symptom must be found . first — and the pain abated before the doctor troubles himself about the disease.

TIGLIUM (*Croton tiglii*).—The botanical name of the croton oil plant. This powerful and well-known medicinal plant is a native of the East Indies and most of the islands of the Eastern Archipelago, and has long been regarded not only as a valuable remedy for dropsy, but the natives esteem it as a certain antidote for the bite of venomous reptiles. The root, leaves, and indeed every part of the plant is highly drastic, and acts most powerfully on the bowels; it is from the seeds, however, that the article used in medicine, the oil (*oleum tiglii*), is obtained,—an article so active in its operation that *one* drop placed on the tongue, or given in the form of a pill, will in a few hours act on the alimentary canal as a powerful drastic purgative, producing copious watery evacuations; hence its singular efficacy in cases of dropsy. Besides its purgative property, croton oil possesses that of an irritating stimulant, and will, if rubbed on the body in any part where the skin is thin, produce a crop of pimples or vesicles filled with a lymph-like water, exactly resembling those produced by tartar emetic. When mixed, however, with olive oil, as in the *linimentum crotonis*, it acts as a stimulating liniment in cases of old rheumatic pains. The danger of affecting the stomach, however, and inducing an excessive action on the bowels, deters most medical men from using it as an external remedy. Croton oil, like mezereon, produces a hot, burning sensation in the throat, which is apt to excite sickness and vomiting. When taken in excess, the oil acts as an irritating, corrosive poison. The dose of croton oil as a purgative is from one-half to 2 drops. A preparation has of late years been introduced into the Pharmacopœia called croton soap (*sapo tiglii*), said to be less irritating and nauseous than the oil, the dose of which is from 1 to 3 grains.

TIME. See Watch.

TIN (*Stannum*).—This well-known metal is of a white, silvery colour, specifically light, soft, and, like lead, easily fused or melted, and is found in the greatest abundance in Cornwall. It is extensively used in the arts, and by its combinations produces bronze, bell-metal, gun-metal, and pewter; while with mercury it forms the amalgam used for silvering looking-glasses. Tin is never used in medicine as an internal remedy, except in the form of the raspings or granules of the pure metal, called *pulvis stanni*, and that is only given as a vermifuge, to kill the round worms of children. See Worms. A chloride of tin is used as a disinfecting agent, and is probably the most powerful article of that nature we possess.

TINCÆ OS.—A name given by surgeons to the mouth of the womb, or *os uteri*, the former name being applied to that portion of the uterus from its supposed resemblance to the mouth of the tench (*tinca*).

TINCAL.—The name given to the impure borax, as originally imported.

TINCTURE.—A medical preparation, generally made by macerating roots, barks, leaves, or gum-resins for seven or fourteen days in proof spirits, and then filtering the menstruum. Some tinctures, however, are made with pure spirits of wine, or alcohol, such as the tinctures of benzoin, myrrh, tolu, and camphor; the ingredients entering into each, being pure resins, can only be dissolved or taken up by a spirit at 50 or 54 degrees over proof. For the convenience of those who may wish to know at a glance the most important action of each tincture, with its adult dose, we have arranged alphabetically the most important of the simple and the compound, and those made with spirits of wine.

Simple.

TINCTURES.	USES.	DOSE.
Aconite	Sedative	5 to 10 drops.
Aloes	Purgative	2 to 8 drachms.
Assafœtida	Antispasmodic	20 to 60 drops.
Belladonna	Narcotic	5 to 10 drops.
Calumba	Stomachic	1 to 2 drachms.
Cantharides	Diuretic	15 to 30 drops.
Capsicum	Stomachic	5, 10, or 15 drops.
Cardamoms	Carminative	1 to 2 drachms.
Castor	Antispasmodic	30 to 60 drops.
Catechu	Astringent	1½ drachm.
Colchicum	Purgative and diuretic	20 to 60 drops.
Cubebs	Diuretic	1 to 2 drachms.
Digitalis	Sedative	20 to 40 drops.
Galls	Astringent	30 drops.
Gentian	Stomachic	2 drachms.
Ginger	Carminative	20 to 40 drops.
Hops	Stomachic	1 to 2 drachms.
Hyoscyamus	Sedative	30 drops.

TINCTURES.	USES.	DOSE.
Iodine	Stimulant	10 to 30 drops.
Jalap	Purgative	2 to 4 drachms.
Kino	Astringent	30 to 90 drops.
Lobelia	Tonic	20 to 30 drops.
Myrrh	Stimulant	30 drops.
Opium (*Laudanum*)	Narcotic	20 to 25 drops.
Orange peel	Stomachic	1 to 2 drachms.
Squills	Expectorant and diuretic	10 to 30 drops.
Tolu	Expectorant	20 to 30 drops.

COMPOUND.

TINCTURES.	USES.	DOSE.
Aloes	Emmenagogue	30 to 60 drops.
Bark	Tonic	1 to 2 drachms.
Benzoin	Expectorant and stimulant	30 drops to 2 drachms.
Camphor (*Paregoric*)	Expectorant	1 to 3 drachms.
Cardamoms	Stomachic and cordial	2 to 4 drachms.
Castor	Antispasmodic	30 to 90 drops.
Cinnamon, or Aromatic tincture	Stimulant	1 to 2 drachms.
Gentian	Tonic	1 to 2 drachms.
Guaiacum	Stimulant	30 to 60 drops.
Iron	Tonic	15 to 40 drops.
Lavender	Antispasmodic	30 to 60 drops.
Rhubarb	Purgative	4 to 6 drachms.
Senna	Purgative	4 drachms.
Valerian	Antispasmodic	30 to 60 drops.

TINEA CAPITIS.—The disease known as Scald-head.

TINNITUS AURIUM.—A medical term for a ringing in the ears, a symptom of certain conditions of fever; also of a congested state of the brain, indigestion, and other stomachic affections. See SINGING IN THE EARS.

TISSUES.—A name given by anatomists to the primary textures of the body, such as the *fibrous, cellular,* and *mucous* tissues.

TOBACCO (*Nicotiana tabacum*).—This well-known plant, originally brought from America in the sixteenth century, and now cultivated in every part of the world where enough sunshine and moisture can be found to bring it to perfection, is universally consumed by people of all nations, creeds, and colours, by the civilized and the savage. Though possessed of strong narcotic and sialogogue principles, and belonging botanically to an order—*Solanaceæ*—that yields many esculent and medicinal plants, the tobacco is hardly ever used in medicine, a result attributable entirely to the violent nature of its action on the system. The only preparations of the plant ever employed in practice are *the wine* (*vinum tabaci*), and the injection (*enema tabaci*); the latter being only used where it is desirous to overcome muscular resistance and relax the frame, as in cases of rupture and difficult dislocations. The dried leaves, reduced to powder, are sometimes used as a snuff, or errhine, to relieve the head in certain nervous affections. The narcotic effect of the tobacco depends upon a volatile alkaloid principle called *nicotin*. No article to which man ever addicted himself, not even alcohol, has been so abused as tobacco, for not only has the vice of its intemperate use descended to boys and absolute children, but men snuff, smoke, and chew to an extent that has already stamped a nation of many millions with all the characters of physical decay; but worse even than this wide-spread infatuation, women have become slaves to the odious vice, and in its most degraded form, that of *snuff eating*. Taken into the stomach, tobacco acts as a narcotic poison, and demands an immediate emetic, the stomach-pump, and the remedies used for a case of poisoning by opium. See SMOKING.

TODDY.—A strong fermented spirit obtained from the juice or sap of the cocoa-nut palm tree; a beverage which is either drunk pure or mixed with the fiery compound called arrack, the spirit obtained from rice.

TOES, DISLOCATION OF THE.—These small members are occasionally, though not often, displaced, either at their own joints or from their metatarsal bones. Whether the dislocation is upwards or downwards, the same treatment is necessary as for a similar accident to the fingers; either by simply extending the member with the hands, or by making a loop of tape over the next joint, and steadily pulling the part forward, while another person grasps the foot and keeps it stationary. See DISLOCATION.

TOLU, BALSAM OF.—A semi-fluid, resinous extract or exudation of the South American plant, the *Myrospermum toluiferum*, a highly fragrant and aromatic balsam, much esteemed in medicine on account of its stimulating and expectorant qualities. The only preparations of tolu ordered in the Pharmacopœia are the tincture (*tinctura tolui*) and the syrup (*syrupus tolui*), which, as additions to cough mixtures, are often of considerable importance. The dose of the tincture is from 20 to 40 drops, and of the syrup from 2 to 4 drachms.

TONGUE (*Lingua*).—The organ of

speech and taste. This fleshy and important member is composed entirely of two sets of muscles, which meet in the centre to form a line of separation. The muscles run in different directions, their fibres being disposed in layers, each set bound to the other by cellular tissue. The tongue is attached to the hyoid bone, and the cartilages which form the organ of voice, or larynx, and to the fauces, these attachments giving names to the principal muscles, as *glosso-hyoideus*, *glosso-pharyngeus*, *genio-hyo-glossus*, and some others. The tongue is covered by the lining membrane of the mouth, a reflection of the skin, but entirely altered in its character as it crosses the lips, becoming, directly it does so, a mucous membrane. On the upper surface of the tongue this membrane or skin is of a dense, compact texture, with a thin, scarf-skin-like tissue above it, allowing the *papillæ*, or elevations of the branches of the gustatory nerve, to appear through its transparent tunic. Below the tongue, the lining membrane becomes very thin and loose, forming the bridle, or *frænum lingui*. The lingual or ninth pair of nerves is distributed on the muscles of the tongue, to endow them with motion, while the gustatory nerve, or branch of the fifth pair, endows the organ with taste, and is distributed for that purpose to the papillæ on the upper surface of the tongue. From the situation of the organ, and its intimate connection with the stomach by means of the mucous membrane that lines both mouth and stomach, the tongue serves the purpose of a telegraph to that organ, and teaches the physician who properly notes its workings many of the secret functions of the stomach, by the thickness and colour of the fur or coating thrown on its surface. Before describing the different conditions of the tongue in disease, we must observe that even in health it varies very much in shape, colour, and the appearance of its fur or coating; thus, in the morning, with the most healthy, the tongue is often covered with a thin white fur before breakfast; in others it is coated behind and clean in front.

SIGNS OF THE TONGUE.—The papillæ are sometimes elongated, and protrude through the fine mucous membrane, and are often covered with a white fur, as in cases of scarlet fever. This is what is known as the speckled tongue, and is a symptom of that disease: a similar effect is sometimes observed in cases of acute *dyspepsia*. In the first stages of fevers the tongue is generally covered with a white fur; the same in catarrh, inflammatory fevers, and rheumatism. In the second stage of fever the tongue is coated with a deep brown fur, the organ becoming moist and clean as the irritation subsides. In some cases of dyspepsia the tongue is covered with a thick white fur over the back, while the point and sides are clean and red. In constipation it is sometimes covered entirely with a brown fur, at others it appears perfectly clean, and in some cases of a moist glistening red colour. This indication is almost always a sign of acidity in the stomach, as a thick white-coated tongue is of inflammation in some mucous tissue; while, on the other hand, a yellow coat on the surface of the tongue is indicative of a biliary affection. The tongue, like other organs, is liable to inflammation and ulceration, and even to cancer, a disease that not unfrequently attacks both the tip of the organ and even the centre, in which case it is sometimes necessary to destroy the diseased portion by caustic, cut it off by a ligature, or remove it by excision with the knife. The tongue is also much excited by particular drugs, causing inflammation and enlargement; mercury, antimony, and copper particularly exert an action on this organ, among the minerals, while mezereon and pelletory, among the vegetables, affect it in a marked degree. Though medical men examine the tongue to obtain an insight into the state of the stomach and bowels, and ascertain what amount of blood is circulating in the abdominal viscera, it is totally impossible to convey anything like a perfect idea of all the shades of information which to the practical man the thickness, colour, and position on the tongue of the coat or fur indicates. The facts already stated will, however, convey a general idea of the meaning of those indications.

TONGUE-TIED.—This is a term used when a child is unable to move its tongue in such a manner as to make a perfect vacuum of its mouth when grasping its mother's nipple. When the tongue has free motion, and with the lips grasps the nipple firmly, the vacuum made is complete, and the nipple being pulled out, the milk flows into the infant's mouth; when, however, the motion of the tongue is confined, the infant is unable to secure the organ for any time, the vacuum is imperfect, and only occasional driblets of milk are drawn from the breast; the child, in petulant irritation dropping the nipple and throwing back its head, expresses its disappointment in querulous cries. It is very seldom that this defect arises from muscular deficiency or natural malformation; the cause, in nine out of ten cases, depending on the lining membrane, where it forms a fold under the tongue, and which, being attached almost to the tip of the organ, thus binds it down by the bridle, as it is called, or the frænum, preventing all but the most limited motion. In such a case the TREATMENT is very simple, and the cure instantaneous; it consists in merely passing the limb of a sharp-pointed pair of scissors through the thin skin below the tip of the tongue, as near the external margin as possible, and nipping it apart. To do this simple operation safely and properly, the nurse should hold the child on her lap, and the surgeon, seated before her, should place the back of the infant's head between his knees, and, making the child cry, watch his opportunity to transfix the mucous membrane, and cut the mere thread of membrane *outwards*, and then place the child to the breast, its steady drawing of the nipple being the best evidence of the success of the operation. As the renal artery and vein are in close proximity, the operator must be careful that he does not transfix or wound either. At the same time he must be careful not to credit every mother or nurse's assertion that a child is tongue-tied till he has satisfied himself by examination, and by putting his finger into its mouth, that the infant is unable to grasp with its tongue.

TONICS.—A class of medicines supposed to give tone and strength to the muscles and the system generally. Tonics are divided into the mineral and the vegetable.

Mineral Tonics are copper, silver, zinc, iron, the *mineral acids*, nitric, muriatic, sulphuric, and nitro-muriatic.

Vegetable Tonics.—These are cinchona, quinine, gentian, colombo, quassia, camomile, cascarilla, and all the bitter roots and barks. Besides these, many of the purgatives, such as rhubarb and aloes, act as tonics, when given in proper doses and judiciously combined. Among the natural tonics are to be included air, exercise, and a full dietary, and among the assistant agents, animal food, wine, porter or stout, and cold ablutions.

TONSILS.—The name given by anatomists to the glands contained in a fold of the lining membrane of the mouth, and which form on either side the pillars of the soft palate, or the *fauces*. The tonsils, properly speaking, are two small oval-shaped glands, one on each side, enclosed in a fold of mucous membrane, and supposed to secrete a salivary fluid, though their proper function has never been satisfactorily explained. The tonsils are very liable to a state of chronic inflammation and enlargement, and in some instances become so swollen as to hang low in the mouth, and very seriously interfere with swallowing and breathing, and almost entirely prevent the patient from chewing. Enlarged or swollen tonsils are always attended with what is called sore throat, and in scrofulous constitutions are repeatedly in a state of chronic induration. Sometimes, but not often, the tonsils suppurate, when there is great difficulty in knowing in which direction the abscess will break, whether inwards into the mouth, or outwardly on the neck. In cases of ordinary relaxation, an astringent gargle of sage tea and vinegar, or of logwood and alum, or catechu and water, or an infusion of pomegranate or rose leaves with diluted sulphuric acid, will generally induce a contraction; but when they are red and painful, and begin to swell or throb, hot fomentations or poultices of bread or bran round the throat, with a little cooling medicine and an abstemious diet, are the means to be adopted. In ulceration of the tonsils, and in obstinate cases of relaxation, it may be necessary to apply the nitrate of silver or lunar caustic freely to the part, but in such diseases a surgeon should be at once consulted.

TOOTHACHE.—This is the most trying and irritating pain to which the body is subject, and rendered perhaps the more so from the fact of the apparent insignificance of the cause. As we have already stated under Tic-douloureux, toothache is a species of neuralgia, caused by the air or some particles of food coming in contact with the nerve of the tooth, the tooth itself being insensible. The primary cause of this disease—when not constitutional—is neglect of the teeth by allowing particles of food to remain in them, when, as they decay, the acids generating gradually corrode the enamel, and then eat through the bone beneath, till a small opening is finally made into the central cavity, when the nerve being exposed at once begins to suffer. When decay commences in one tooth, it is observed that the *caries* usually affects the opposite one; thus caries of the first molar on the left side of the lower jaw is followed by caries in the corresponding tooth above, or the opposite tooth in the lower jaw, the teeth generally decaying in pairs. The TREATMENT is divided into the prophylactic or preventive, and the medical and surgical.

PROPHYLACTIC MEANS.—These, in the first place, are strict attention to cleanliness, keeping the teeth always well washed with a brush and tepid water, or water with a little tincture of myrrh, used at least once a day. Also by taking a pill or mild dose of medicine occasionally, and keeping the bowels from becoming costive, a very common indirect cause of toothache. Directly any speck or mark is observable on a tooth, a dentist should be employed to clear it out, and stop or plug up the cavity, so as to prevent the access of any irritation to the nerve; the same plan being adopted with every tooth on which any sign of caries shows itself. As the accumulation of tartar on and around the neck of the teeth is a frequent cause of decay, the dentist should be occasionally employed to scale the teeth, or remove the tartar from such parts as the person himself is unable to reach. Care should always be taken never to put either very hot or extremely cold substances in the mouth, as toothache is not unfrequently induced by the irritation consequent on such a practice.

MEDICAL REMEDIES.—Almost every drug in the Pharmacopœia has been prescribed or taken in the hope to allay the torment of this nervous pain: the articles enumerated below are a few only of those recommended, but they are such as have borne the test of experience. Before referring to these, it is our duty to caution all persons affected by this disease never to be persuaded to apply *acids*, such as vitriol, spirits of salt, or aquafortis to their teeth, and *never to use* the essential oils, such as oil of cloves, cinnamon, thyme, or aniseed; all these, both acids and oils, are excessively corrosive, and are certain not only to increase the pain, but more or less sure to destroy the tooth, if they do not seriously injure the adjoining ones.

The most serviceable remedies are laudanum, creosote, Friar's balsam, and tincture of myrrh; a few drops of either of these liquids dropped on a piece of cotton wool, and then placed in the decayed tooth, the same being repeated two or three times if required. A small piece of opium, about a grain in weight, is—if the pain is unabated—to be moulded into the shape of a pill, and placed in the decayed portion of the tooth, or a small fragment of camphor may be employed in the same manner.

Some persons use tobacco for the same purpose, but as this is apt to produce sickness, it is not so suited for the end in view. When the toothache continues for some days, with only occasional remissions of pain, and the gums are hot, red, and inflamed, the application of a leech to the gum of the affected tooth, by means of a leech-glass, will be attended with the happiest results, or where the patient has a repugnance to the application of a leech to the gums, a small blister laid behind the ear of the affected cheek will, after a few hours, often afford the same amount of relief. When toothache is suddenly induced by cold, chewing a piece of pelletory root will frequently, by the large quantity of saliva it induces, afford benefit; if not, however, a piece of cotton wool, soaked with laudanum, put into the ear of the affected side, and the cheek covered with a hot napkin, will sometimes subdue the pain when all other means have failed. Sailors are in the habit of blocking up one or both ears with a plug of moistened tobacco, and as one sedative will often afford benefit when another has failed, the tobacco to the ear may be tried when the pain resists all other remedies. In their desperation at the persistency of the pain, persons sometimes heat a darning-needle, and thrust it red-hot into the tooth, with the object of destroying the nerve; this, however, like the application of acids, not only intensifies the pain for the time being, but will render the tooth tender for months. Chloroform is, perhaps, the most immediate and efficacious of all remedies yet employed for toothache, but should only be taken under medical superintendence. Electricity will often afford instant benefit, and for cases of toothache the effect of nervous irritability, it should be employed in the form of Pulvermacher's chain.

SURGICAL REMEDIES.—These consist, in the first place, of stopping the decayed portion directly the patient is conscious of injury. For this purpose cements of different degrees of hardness and adhesion, according to the approval of the surgeon-dentist, are now to be obtained at every chemist's shop: care must be taken in using these stoppings, that while they effectually close the aperture, they do not press on the tender nervous pith within, or project above the level of the tooth without. The next operation is that of scaling the teeth whenever a deposition of tartar renders such a measure necessary. Some persons are remarkably free from such incrustations; the saliva of others is so loaded with earthy salts, that their teeth are often covered, and the mouth rendered most unsightly, by the deposition of hardened tartar. The last and radical operation is that of—

TOOTH-DRAWING.—The instruments necessary for the due performance of this operation are a gum-lancet, a tooth-key, as the lever and claw is called, and a pair of strong bent forceps or pincers. Considerable art and much practice are necessary to draw teeth neatly, expeditiously, and without causing unnecessary pain. In the first case, the surgeon should be careful never to parade his instruments in the eyes of his patient, but make all his arrangements apart from or behind the back of his visitor; *never to place a patient, male or female, on the floor; and still more, never to be guilty of the coarseness of holding the sufferer's head between his knees;* such positions are not only unbecoming, but perfectly unnecessary, and needlessly alarm the patient. A common arm-chair is the most convenient article in which to seat the person, and an easy chair the most objectionable. In drawing teeth from the *lower* jaw the surgeon should stand in *front* of his patient; in extracting teeth from the *upper* jaw his position is always *behind* the patient. The claw, or moveable hook, at the side of the key, requires being altered according to the position in the jaw of the tooth to be drawn; the position proper for the teeth of the *right*-hand side of the lower jaw is that required for the left-hand side of the upper jaw, and *vice versâ* for the opposite sides. The reason that persons so often break the teeth they are drawing, or leave one of the fangs behind, arises from the mistake committed in the direction in which the tooth is drawn, and the pressure being made on the tooth itself. These accidents may almost always be prevented, and the patient saved the pain of more than *one pull*, as it is called, by observing the following simple rules:—*All the double teeth in both jaws, except the last tooth on each side, above and below, should be drawn outwards, that is, the fang of the claw is to be fixed inside of the tooth, so that the tooth, when turned out, may point to the cheek; the four back or wisdom teeth are to be drawn inwards, the claw fixed outside, and the tooth drawn into the mouth.*

Before proceeding to operate, the surgeon, having adjusted the claw to suit the side of the head and jaw, where the tooth is situated, should tear off a narrow slip of lint, and folding it round the bolster of the instrument, form a kind of pad, to save the gum from the pressure of the iron fulcrum. Having placed his key in readiness, the surgeon then proceeds to scarify the gum, or to separate the gum on all sides from the tooth. This is generally effected by pressing the flat blade of the lancet between the gum and the tooth, merely dividing the few fibres that here and there run into the bone of the tooth. A little warm water is now given to the patient to cleanse the mouth and wash out the blood. The operator next takes the key in his right hand by the handle, and putting the claw across the tooth, and pressing the fang into the shoulder of the tooth, keeps it in that position by the thumb of the left hand, while he brings down the padded fulcrum till it rests on the *jaw and gum* BELOW the crown of the tooth; he then, still keeping his left thumb on the top of the claw, steadily and slowly turns the handle of his lever, as if he were unlocking a door, the probability being that in that half-turn of the hand he brings the tooth away fixed in the instrument—a successful issue that may almost always be effected if the fang of the claw is fixed in the neck of the tooth, and the fulcrum or bolster establishes its pressure on the jaw. These are the two most important points to be remembered in tooth-drawing. When the tooth is too much decayed to admit of its giving a firm point for the claw, a small piece of gum should be cut away with the lancet, to give one. When the tooth is in the upper jaw, the surgeon operates from behind, over the patient's head, which he keeps firmly pressed against the pit of his stomach, in no case requiring an assistant to hold the head. If the tooth has not come out in the key, it should be seized with the forceps, and by a few backward and forward motions brought out, but not with a jerk, or violently; and if it should be found to adhere to a piece of gum, the lancet must be used to divide the fibres before reinserting the forceps. The gum should then be pressed together with the thumb and finger, and the patient supplied with warm water to encourage the bleeding; after which, if there is much pain felt, a piece of lint soaked in laudanum should be placed in the gum, and the patient cautioned against the danger of washing the mouth with spirits.

To remove stumps some dentist surgeons use a short lever, called a punch or elevator; this, however, causes needless pain, as every stump may be extracted with the key,—the least painful and most expeditious mode of removal: the cutting away a modicum of the gum will always give the surgeon a point for fixing the claw.

TOOTH-POWDERS.—Except when the teeth are loaded with fur or tartar, and friction is necessary to remove the offensive coating, tooth-powders are quite unnecessary to keep the teeth in health and cleanliness; plain water and a little tincture of myrrh, with a brush, are all that is needed for these purposes. For the satisfaction of those who may require such dentifrices, we subjoin a few of what we regard as the best of such preparations.

When mere friction is required, powdered charcoal or cuttle-fish are the simplest articles that can be used, though it is customary to combine them in some such manner as the following.

No. 1. Take of—

Finely powdered charcoal.	2 ounces.
Powdered myrrh . .	2 drachms.

Mix thoroughly, and use every morning.

No. 2. Take of—

Powdered cuttle-fish bone	2 ounces.
Powdered myrrh . .	2 drachms.

Mix.

No. 3. Take of—

Armenian bole . . .	2 ounces.
Powdered Peruvian bark	1 ounce.
Powdered myrrh . .	2 drachms.
Powdered kino . . .	3 drachms.
Carbonate of soda . .	2 drachms.

Mix. To be used where the gums are weak and spongy, and in cases of scurvy of the mouth.

No. 4. Take of—

Armenian bole . . .	1½ ounce.
Prepared chalk . . .	1½ ounce.
Peruvian bark . . .	1 ounce.
Cuttle-fish.	4 drachms.
Powdered myrrh . .	2 drachms.

Mix. This makes a good and generally useful powder.

No. 5. Take of—

Finely powdered chalk	3 ounces.
Camphor, reduced to powder by a few drops of alcohol.	2 drachms.

Mix thoroughly,—a useful tooth-powder where the gums require stimulating.

As a wash for the mouth in cases of soft or bleeding gums, or when on the slightest pressure they bleed, a teaspoonful of the following mixture in a tumblerful of water forms a very useful astringent wash.

Take of—

Tincture of kino . . .	½ ounce.
Tincture of rhatany .	½ ounce.
Tincture of myrrh . .	½ ounce.

Mix.

TOPICAL.—A surgical term for local applications, local bleedings, or anything applied to the surface of the body.

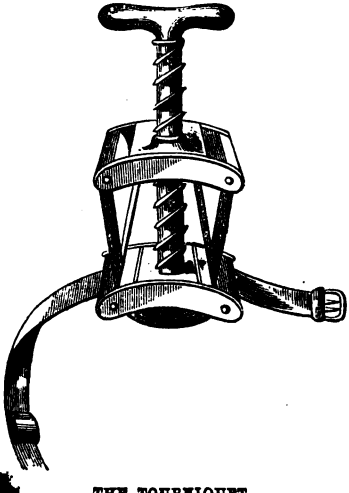
TORMENTILLA ROOT.—This plant, native of the wastes and commons of England, was at the beginning of this century held in high esteem by medical men as a valuable remedy in diarrhœa and fluxes of all kinds, and as a tonic generally. It is now, however, only regarded as an ordinary astringent, and very seldom employed even in that capacity. The dose of the powder is from 20 to 30 grains, and of the decoction, the most approved preparation, 1 ounce three times a day.

TORMINA.—The after-pains of childbirth.

TORPOR.—Languor, weariness; torpor of mind is mental depression, torpor of body is a physical exhaustion.

TOUCH.—One of the five senses. The function of feeling, the faculty by which we are made conscious of external objects, and are able to distinguish between hard and soft, round or square, long or short, and rough or smooth. While the other four senses are circumscribed and confined to certain localities, and are all grouped in close approximation, the faculty of touch or discrimination is diffused over the whole body, the nerves that supply the power being spread over the entire cuticle, and although in the perfect and healthy man the faculty of touch or feeling is centred in the *papillæ* of the cushion-like elevation of the fingers and thumbs, it sometimes happens, from malformation or physical defect of the individual, that the property usually placed in the fingers is developed elsewhere, sometimes in the toes, in the pit of the stomach, the skin of the arm, shoulder, or face, while in some individuals the tongue is not only the organ of taste, but of feeling also. Many blind persons are in the habit of conveying everything, of the finer properties of which they desire to be informed, to the investigation of the tongue. Persons born without legs or arms, and blind, could only describe a substance by having it passed over the stomach or between the shoulders, and one individual could only hear what was said to him when the speaker placed his lips to the skin covering the pit of the stomach. The compensating power of nature is better known than understood; whenever one sense is destroyed, or is wanting, the others, that the body may suffer nothing by the loss of one of its videttes, or sentinels, become intensified. The extreme delicacy of the blind man's sense of feeling is well known; the appreciating powers of his ears and hands rendering the loss of his eyes a matter of small import, as far as the welfare of the body is concerned. The sense of feeling, or touch, is centred in the minute terminal extremities of the sensific nerves, diffused over the cuticle in the form of nervous *papillæ*. Excess of heat or cold, or a redundancy of moisture, equally impairs the function of feeling; hence the necessity of keeping the skin in a state of healthy perspiration, to assure a perfect appreciation of what is submitted to it.

TOURNIQUET.—A surgical instrument to suppress a sudden flow of blood, and used during the performance of certain operations to prevent, by pressure on the main artery, the unnecessary effusion of arterial blood. A bandage tied 'round a limb, with a small pad beneath, and the ligature tightened by inserting a piece of stick, and giving it one or two turns, will always answer the purpose of a tourniquet, if the proper instrument is not at hand; care must, however, be taken that the pad is laid above the artery to be compressed. The tourniquet is only applicable to the extremities of the body, but even in these parts modern surgeons seldom use them in amputations, depending on an assistant to compress the artery with his thumbs while the operation is taking place.



THE TOURNIQUET.

TOW.—The loose fibres of the flax, obtained from the carding machine, and used by surgeons in the dressing of fractures and the padding of splints, &c.

TOXICODENDRON.—An American plant called the "poison oak," possessing properties resembling *strychnia;* sometimes given in cases of paralysis, rheumatism, and cutaneous diseases.

TOXICOLOGY.—A history of poisons, or how to treat cases of poisoning, with tests for each poison.

TRACHEA.—The Windpipe, which see.

TRACHEOTOMY.—The operation of opening the trachea, or windpipe, as in cases of croup, to save the patient's life, endangered by the formation of a false or adventitious membrane. It is also sometimes performed to extract foreign bodies that accidentally get lodged in the air-passages.

TRAGACANTH.—The name of a gum brought from the Levant and Syria, and principally used by shoemakers in the manufacture of the gummy paste used in their trade. A compound powder of the gum, made with powdered gum arabic, tragacanth, starch, and sugar, is the only preparation used in medicine of this article. This powder rubbed down with warm water into an emulsion, with squills, tolu, and paregoric, makes an excellent cough mixture. As an expectorant and diaphoretic in influenza, we know of no better mixture than the subjoined. Take of—

Compound tragacanth powder	3 drachms.
Spirits of mindererus .	1½ ounce.
Syrup of tolu. . . .	4 drachms.
Syrup of squills . . .	6 drachms.
Antimonial wine . .	3 drachms.
Spirits of sweet nitre .	4 drachms.
Warm water	5½ ounces.

Mix: make an eight-ounce mixture; two tablespoonfuls to be taken every six hours.

TRAGUS.—A portion of the cartilage of the ear next the temples, so called because sometimes covered with hairs.

TRANCE.—There can be no doubt but that many of those remarkable cases of apparent insensibility, death-like sleep, and singular revelations of sleep-walkers, which fill the volumes of the "Philosophical Transactions," and have more or less been classed under the general head of Trance, would, had they been examined by the knowledge we now possess, have been attributed to mesmeric sleep, clairvoyance, or electro-biology, rather than to so vague and unsatisfactory a head as that of trance. There are few subjects more interesting than that of tracing the connection between all the well-authenticated cases of trance and animal magnetism, or, as it is now called, mesmeric influence; but in a practical work like this we must keep to matter of fact, and look upon trance in the only point of view in which medical men regard it, namely, in that of catalepsy, which of itself is one of the most extraordinary, as it is fortunately one of the rarest, of all the diseases which the physician is called upon to investigate.

The essential feature of this remarkable disease is a fixing of the body in the position in which it may be placed or is standing at the moment of the attack. If in the act of declamation, talking, dancing, or smiling—whatever may be the attitude of the body when the fit strikes it, —in that posture, as if on that instant converted into stone, the frame remains statue-like, dumb, and motionless. It is no longer a living mortal, full of sentient life; it has become a lay figure, whose arms, legs, or members we may dispose as we please, and like a plastic mould make the form kneel, bend, or threaten, assume any position fancy may dictate, or if we wound or scorch it, it is equally insensible to appeal or suffering, and for the time the fit endures is like a gutta-percha image, obedient to whatever mould we shape it into. How long this unnatural state may endure is uncertain; sometimes it lasts only a few minutes, sometimes for days, and even weeks.

A boy, while engaged in play with his shouting companions, was seized with catalepsy while in the act of bounding forward, and with one foot from the ground and his arms extended, was struck as by an enchanter's wand, and remained a living statue, while his companions rioted around him; in three minutes the fit passed off, as rapidly as it came on: the foot dropped to the ground, the arrested bound was completed, and with shout and laugh the heedless boy, unconscious of his arrest, tore after his hilarious associates. With the return of consciousness comes back sensation, and the suffering of any injury that may have been inflicted during insensibility. The fit itself is rarely fatal, though a frequent recurrence of it weakens the intellect, and leads to or results in softening of the brain. The causes of this disease are as obscure as its features are extraordinary, consequently the treatment must be purely symptomatic: the supposed cause of irritation should be removed, leeches applied to the spine, and such a course of tonics, with baths, friction, and ablutions employed, as the case may seem to demand.

TRANSFUSION.—The operation of conveying the blood from a healthy person into the veins of an exhausted or dying one. The extreme difficulty of transfusing the vital stream from one body to another, before the blood loses its vitality by coagulation, has hitherto prevented this discovery from being made generally available. In a few cases of cholera and flooding in childbed, where the operation has been effected, the result has been most satisfactory.

TRANSVERSALIS.—The name of several muscles of the body, particularly of the abdomen and neck, back, and feet.

TRAPEZIUS.—A square muscle of the back, which moves the shoulder-blades upwards, downwards, and backwards. From the same word comes the *trapezoid*, a small bone of the *carpus*, or wrist.

TRAUMATIC.—A medical word signifying diseases or affections caused by or in consequence of wounds.

TREACLE.—The natural syrup of sugar; molasses, the dark, thick, unctuous substance that oozes from sugar, and which is used for the distillation of rum.

TREMOR.—A nervous shaking of the muscles of the hands or limbs generally; a mild species of paralysis.

TREPAN, OR TREPHINE, TO.—A surgical operation which implies the removal or the elevation of a piece of bone of the skull. The instruments employed in this delicate operation are a square and circular saw, a lever, elevator, brushes, and a scalpel. As the person is generally in a state of absolute coma, or insensibility, the surgeon has no need to hurry his operation, and may therefore perform each step with deliberate care. When the skull has been beaten in on the brain, the scalp over the depression is first to be shaved, a crucial incision is then to be made through the integument, and the flaps reflected back. The skull is then exposed, and a small piece of bone close to the depression removed by means of the circular saw, so as to admit of the elevator being passed under it, and by means of a piece of cork to act as a *fulcrum*, the depressed bone prised up and adjusted as near as possible into its proper situation. The moment the bone is elevated, the patient sighs, opens his eyes, and recovers consciousness; the circular piece of bone is then made fast to a piece of plaster, and fitted into the hole from which it had been sawn, and the scalp readjusted and dressed with warm water dressings.

TRIANGULARIS PECTORIS, OR STERNI.—A pair of muscles on the anterior part of the thorax, which serve to pull down the ribs in inspiration.

TRICEPS.—The name of a muscle with three heads, or rising from three points; one muscle is situated at the back of the arm, another at the back of the thigh.

TRICLINIUM.—A three-sided table, such as those at which the Romans were accustomed to partake of their meals, each person reclining on his left side, three on each side of the table. A triclinium thus accommodated nine.

TRICUSPID VALVE.—One of the valves of the heart, situated between the right auricle and ventricle, and so named from having a triangular shape.

TRIFACIAL.—The name given by anatomists to the 5th pair of nerves: the great sensitive nerve of the head and face, and so called from having three important branches.

TRIGON.—A smooth, triangular space at the *fundus* of the bladder.

TRISMUS.—Locked Jaw, which see.

TROCHANTER, MAJOR AND MINOR.—Two eminences near the neck of the thigh-bone, in which some of the flexor and rotator muscles of the lower extremities are inserted.

TROCHAR.—A surgical instrument like a small bayonet or stiletto, enclosed all but the point in a silver sheath, called *cannula*. The trochar is used to perforate the chest, abdomen, or scrotum in cases of dropsy, to draw off the collection of fluids they may severally contain.

TROCHISCUS.—A round medical confection or lozenge.

TROCHLEA.—A cartilaginous loop, through which the tendon of the oblique muscle of the eye passes on its way to the side of the organ, and so called from its answering the purpose of a pulley.

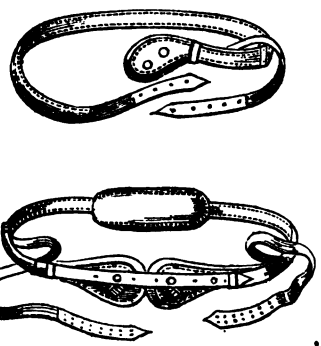
TRONA.—The sesqui-carbonate of soda.

TRUFFLES.—An edible fungus, belonging to the Cryptogamic order of plants. This singular plant without root is found chiefly in Italy and the south of France, growing about four or five inches beneath the earth, and varies in size from a pea to a potato. Truffles are hunted for by dogs trained for the purpose, who, when they discover the scent, bark and scratch the spot till it is dug up. The Italians train pigs for this purpose. The truffles are either roasted and eaten as a potato, or, cut into slices and dried, are used to flavour sauce. They are considered light, nutritious, and easy of digestion.

TRUMPET, SPEAKING.—An acoustic implement to enable a deaf person to hear a conversation addressed to him; the metal of which the article is generally made reverberating the sound. Acoustic tubes are now made of many sizes and shapes, and of various materials. The implement best suited for each case can only be discovered by an actual test of the apparatus, and even then knowledge of the case will be required by the tradesman, in suggesting the most fitting implement for the applicant's use.

TRUNCATED.—An anatomical term for something cut transversely across—cut off—lopped.

TRUSS.—A surgical apparatus to sup-



SINGLE AND DOUBLE-HEADED TRUSS.

press a hernia. As ruptures are purely mechanical—injuries, the giving way of one part and the protrusion of another,—so the remedy for those capable of reduction is also mechanical, and consists of a bent elastic spring lever, with two points of pressure, one behind and the other on the seat of the injury. Trusses are made to suit each form of rupture, and are either single or double, and now manufactured on such scientific principles that they preserve a steady pressure to the very last.

Those made by Salmon and Ody, and by Cole of Charing Cross, are the best and safest trusses that can be procured. The circumference of the body taken an inch below the hips, and forwarded to the makers, will insure a truss being supplied to fit the side specified.

TUBERCULAR CONSUMPTION is the most important disease of the substance of the lungs after *pneumonia*. Tubercles are diseased deposits from the blood, which may take place in any of the tissues of the body, though they occur most frequently in the spongy texture of the lungs. Tuberculous matter is in the first instance deposited in a liquid form, which after a time becomes coagulated, and eventually decomposed, and acting like a foreign body, induces a softening and ultimately an ulceration of the part, causing those suppurating cavities which form the pathological features of Phthisis, or Consumption, which see.

TUMID.—Puffed up, swollen, enlarged.

TUMOUR.—A permanent swelling on some part of the body. Tumours are of several kinds, and of many shapes, sizes, and orders. The principal divisions, however, are into fleshy tumours (*sarcomatous*), fatty tumours (*adipose*), and encysted tumours (*steatoma*). Tumours are again divided into the *simple* and *malignant;* of the latter, there are several varieties. As tumours can very seldom be absorbed, and there is but one mode of radical treatment, namely, excision, it is quite unnecessary to enlarge on a subject so purely surgical.

TUNBRIDGE WELLS.—For these chalybeate waters, see WATER, MINERAL.

TUNGSTATE.—A salt composed of tungstic acid and a base.

TUNICA.—The Latin for a coat or investing membrane, as the *tunica conjunctiva* of the eye, *tunica arachnoidea* of the brain, and *tunica albuginea* of the scrotum.

TURKISH BATH.—The importance of cleanliness as a sanitary measure, and its value in a personal sense, though long acknowledged, is only now beginning to be practically understood and conscientiously believed. It is true that much has been done within the last twenty years in sanitary reform, by better drainage, better ventilation, and by the establishment of baths and washhouses, to advance the great work of moral and social cleanliness, a subject which, in its true bearings, its influence on health, strength, and mental vigour, we venture to assert, is not at the present hour rightly appreciated by one out of every hundred of the community—not the million in the collective way of speaking, but out of those who, in their devotion to soap and water, pride themselves on their body's purity. For years the sewers of London have been notoriously insufficient for the accumulating *débris* of the overgrown metropolis, even though the finest river in the kingdom was pressed into the service, and became the great artery, not of the city's life, but of its pollution; but with all these years of intimate knowledge of the evil, it is only now that society has bestirred itself to correct this foul abuse. Yet for how many more years have the best of us allowed the common sewers of our own bodies to stagnate upon us, and throw back into the very citadel of life the mephitic vapours that, debarred ventilation and escape, have returned to corrupt the pure stream of life, and with the filth and *débris* of decay and waste, impede and choke up those organs that can only truly minister to life when free and spotless! The truth of this great error is now, however, dawning upon all classes, and men better informed on physiological facts begin to discover that all their boasted cleanliness, their daily baths so ostentatiously used, for all their spongings, ablutions, and their flesh-brush and soap, the common sewers of their bodies are in reality as choked up and foul as ever, and that there is but *one* practical way of opening those closed sluices of the body, and that is by forcing them from within, and not, as heretofore, by applying the pressure from without.

To a large portion of society the skin is but the tegument of the body, the mere covering to the sentient nerves and delicate flesh beneath; and even to those who believe they understand its uses, it never occurs that the cuticle is a *supplementary lungs*, and as necessary to the carrying on of the functions of life as that organ itself. Under Burns, and other headings in this work, we have explained that the skin of the human body is a vast breathing organ, performing the function of respiration in concert with the lungs, and that whatever injures one affects the other, as is shown by the difficulty of breathing that instantly follows a severe burn or scald, or the rash that occurs in scarlet fever, and the dry, hot skin that follows a congested or inflamed state of the lungs; in the same manner, what relieves one organ benefits the other. To keep the lungs healthy, every person of reflection will at once see the necessity of paying strict attention to the skin. But besides being a breathing apparatus, the skin is the organ of touch, feeling, or sensation; is a powerful absorbing structure, and the medium by which all the fluid *débris* or waste of the body, the poisonous matters given off from the several organic factories, are expelled from the system; the due performance of this absorbing and exhaling process, and the perfection of the sensation of feeling, equally requiring a strict attention to the cleanliness of the skin. The fact that the skin is a breathing organ, and as necessary to life as the lungs, the following historical anecdote will satisfactorily show: — When Giovanni de Medici, the son of Lorenzo the Magnificent, received the triple crown at the early age of thirty-eight, under the title of Leo the Tenth, a naked man *was gilt from head to foot, to represent the genius of the Golden Age,* in the pageant got up to give *éclat* to the occasion. Long before the ceremonies of the day were over, however, the golden genius was a corpse, the man dying in a few hours from the breathing mouths of the skin being blocked up. Scrofulous tumours, enlarged glands, obstructed liver, gout, and almost every cutaneous disease, arises from the skin being checked in its function of exhalation, and the poisonous matter that should be thrown off being reabsorbed into the blood, and also by the breathing pores being unable to carry a sufficient amount of oxygen to the lungs to fully decarbonize the blood sent to them.

Though our ordinary ablutions with water, soap, and towel may be sufficient to keep the surface of the body clean for a time, all our common modes of washing are perfectly useless in a sanitary point of *view,* and however paradoxical it may appear, are actually more hurtful than beneficial, driving the dirt and cause of obstruction still farther into the pores; this is the reason why the labourer, who toils at hard work for twelve hours in the heat of the sun, bathed in perspiration, is actually *cleaner* after his day's work than the gentleman who has had his morning and evening bath, with the adjuncts of sponge, soap, and friction. In the former case all the channels and drain-pipes of the skin have been as it were flushed by the copious perspiration, and comparatively cleansed of their obstruction; in the latter the evil has only been driven farther home. As it is both inexpedient and often impossible to resort to the excitement of hard labour to produce this natural bath, there is but one effectual means by which this result can be obtained, and that is by the Turkish Bath, a modern institution in this country, but in its effects precisely analogous to the Roman thermæ, especially the *calidarium* and *sudatorium,* or the hot and sweating baths. The Turkish bath, as it is called, is conducted on the same principle as those of the ancient Romans, the body being gradually annealed by progressive stages of heat to the climax of the sweating-room, where the intense perspiration induced by the dry heat is continued for a sufficient time to flush every channel of the skin, and expel from the body every particle of obstructed perspiration which has for years accumulated in the system. To insure the complete expulsion of the foul matters collected in the skin, the bather is subjected to a process of elaborate manipulation, called SHAMPOOING, a kind of kneading of the muscles of the entire body by the hands of the assistant, by which means every particle of impurity is effectually worked out of the body, which is then scraped and washed, the skin being left as soft and smooth to the feel as velvet. The amount of discoloration worked out of the body by this process is enough to startle the most cleanly and fastidious: from this sudatorium, or sweating chamber, the bather is annealed by lower temperatures to an agreeable divan, where he remains for a certain time to recover from the fatigue of the process, feeling, however, as if he had shaken off a score of his encumbering years.

The warm, the hot, and the tepid bath, though each admirable in its way as a medical agent, are valueless in a cleansing light, and as a prophylactic or sanitary means of warding off disease and preserving health: for this purpose the heat must come from *within*, as in the Turkish bath, the hot air applied to the entire surface at one time, and the same absorbed into the lungs at every inspiration, expands the blood in all its channels, and, accelerating the circulation, causes the arterial blood to bound to the skin, and propels the venous current back to the heart with a momentum that expands all the tubes, and, volatilizing the liquid impurities of the blood, forces them from every pore of the cuticle, which, like a miniature drain flushed by a heavy shower, pours forth a perfect flood of perspiration. In gout, rheumatism, cutaneous diseases, biliary obstructions, and chronic swellings, there is no remedial agent in the power of the physician so immediate and beneficial in its action as the Turkish bath: in cases of ulcerated lungs, or acute pulmonary disease, or inflammatory fevers, however, this remedy would be most injurious. See BATHS.

TURMERIC.—The powder of a West Indian root of the same order as the ginger plant. Turmeric is a warm aromatic spice, and is used in the preparation of some of the Pharmacopœial formulæ, though principally employed for making curry powder. Turmeric is largely used as a dye-stuff, either for yellows or blues.

TURNER'S CERATE.—The compound calamine ointment.

TURPENTINE (*Terebinthina*).—The spirit extracted from the pine tree by fire (see TAR), and afterwards distilled. Turpentine acts on the system as a stimulant (intoxicating if taken in quantity, like gin), as a diuretic, a diaphoretic, in large doses as a purgative, and externally as a rubefacient. It is principally used internally to act on the kidneys, and given in doses of from 10 to 30 drops; and in combination with castor oil, in cases of tapeworm; or combined with camphorated oil, hartshorn, and oil of amber, it makes an excellent liniment in cases of sprains or lumbago. There are several kinds of turpentine met with in the shops,—as the *Terebinthina Canadensis*, Canada balsam; *T. Chia*, Chinese turpentine; *T. Venetia*, Venice turpentine; *T. oleum*, the oil or impure turpentine, obtained by the burning of the pinewood.

TURPETH'S MINERAL.—The old chemical name for the yellow sulphate of mercury, generally used as an emetic for dogs, in doses varying from 2 to 4 grains.

TUSSIS.—A cough; as *pertussis*, hooping-cough.

TUTTY POWDER.—The impure oxide of zinc, used as an absorbent to dust babies, and to make Turner's cerate.

TYLOSIS.—A thickening of the margin of the eyelid, the result of a chronic inflammation of the ciliary ridge.

TYMPANITES.—Drum Belly, which see.

TYMPANUM.—The membrane stretched across the bottom of the external ear, and called the drum of the ear. See EAR, and *cut*.

TYPE.—The order in which the symptoms of a disease occur, and succeed each other; or, in other words, the character which a disease assumes, especially one of an acute or febrile nature.

TYPHOID FEVER.—A fever of a low, debilitating character, and of a typhus form; mild typhus.

TYPHUS, OR NERVOUS FEVER.—Commonly known by the names of *low* fever, *prison*, *jail*, *hospital*, and *camp* fever. The distinctive characters of this fever are that it is *infectious*, attended with little increase of heat, has a weak, small, and quick pulse, *great prostration of strength, and considerable mental disturbance.* Typhus is particularly the disease of the poor, ill-fed, dirty, and destitute. It is divided into two kinds, the *mild* and the *malignant*.

TYPHUS MINOR, or the MILD FORM.—The *symptoms* of this form begin with the usual lassitude, weariness, thirst, and shivering common to fevers, soon followed by dejection of mind, confusion of thought, giddiness, and pain in the head, and dull, aching pains all over the body, with nausea and vomiting. The tongue is furred with a white mucus, which is soon followed by a coat of a dry brown colour, the organ itself becoming tremulous when protruded; the water is pale and thin, the bowels are confined, the ideas become more and more confused, and a muttering delirium supervenes. The heat of the body is now increased, the tongue after a time becomes red, the eyes are suffused and contorted, the face is flushed, the temporal arteries throb, the pulse intermits or is irregular, the urine becomes fœtid, the patient is disturbed with frightful dreams, and is with difficulty roused; plunging of the tendons and diarrhœa soon after occur, and with coma and convulsions the disease terminates in death. This form of typhus runs its course in between fourteen and twenty-eight days.

Typhus Gravior, or the Malignant Form.—The *symptoms* in this phase of the fever are in the beginning the same as the foregoing, only coming on more suddenly and with more intensity; the rigors are excessive, the mental alarm amounts to actual anguish or horror; the heat of the skin often rises to 108°, and conveys a hot, stinging feeling to the fingers. There is soon after nausea and bilious vomiting, with intense pain in the head, a fiery look in the eyes, accompanied with ringing in the ears, violent throbbing of the carotid and temporal arteries; there is also a wild delirium; the tongue is dry, and covered with a dark, almost a black fur, which soon after covers the gums, teeth, and lips; the breath is hot and fœtid; the water is scanty, high-coloured, and most offensive; and as the disease approaches its last stage, hæmorrhage takes place in different parts of the body, while the blood effused under the skin gives rise to the black and discoloured spots called *petechiæ;* the features of the countenance become suddenly sharp, the strength rapidly gives way, the extremities grow cold, and with cold sweats and hiccough, the case soon arrives at a fatal termination.

Treatment of Mild Typhus.—In reducing the febrile symptoms, the fact that typhus is a disease of debility, and depleting means are never or very rarely to be used, should never be forgotten, the fever being treated by depressants in small doses, a farinaceous diet, cold drinks, fresh air, and good ventilation. The head must be shaved, and cold lotions constantly applied to it, or, in severe cases, bladders of powdered ice, and the bowels kept open by the following pills and mixture. When the heat of the skin is excessive, or seems so to the patient's feelings, the whole body should be sponged with cold water, or cold vinegar and water, a composing draught given at bedtime when there is restlessness, want of sleep, or harassing dreams; and towards the end of the disease, to counteract the debility and weakness then prevalent, tonics and stimulants are demanded, and a nutritious iet.

Lotion for the Head.

Take of—

Sal ammoniac . . .	2 drachms.
Powdered nitre . . .	1 drachm.
Dissolve in water . . .	1 quart.
Camphor water . . .	1 pint.

Mix: to be applied on linen cloths.

Aperient Pills.

Take of—

Compound colocynth pill	½ drachm.
Blue pill	½ drachm.

Mix, and divide into twelve pills. One or two to be taken night and morning, to be followed on both occasions by a dose of the—

Saline Mixture.

Take of—

Epsom salts	1 ounce.
Carbonate of magnesia	1 drachm.
Peppermint water . .	6 ounces.

Mix. Three tablespoonfuls to be given an hour after each dose of pills.

Composing Draught.

Take of—

Spirits of mindererus .	6 drachms.
Laudanum	25 drops.
Syrup of orange . . .	2 drachms.
Mint water	4 drachms.

Mix. To be taken at bedtime, when required.

Beef tea slightly thickened, and one or two spoonfuls given at a time, and repeated every fifteen or twenty minutes, will be found the best of all tonics, and will clean the tongue and lips of the *sordes* or black fur that collects there sooner and better than any kind or quantity of medicine. As the patient gains strength, quinine and port wine should be given every few hours, and the person removed to another apartment, and, as soon as safe or convenient, taken out for exercise.

The Treatment for Malignant Typhus is much the same in the early stage as that for the mild form. Except in plethoric habits, it will seldom be necessary to bleed; and when it is, the depletion must be performed in the first days of the fever. Local congestion must be met by topical remedies, such as leeching, cupping, or blistering. The tonics and stimulants will generally be required earlier in this than the mild form of the disease, and should consist of ammonia, ether, and serpentaria, with brandy, for the diffusible stimuli; with wine, quinine, the mineral acids, and bitter infusions among the common stimulants and tonics. The choice of these articles, however, must depend on the amount of debility present, and the state of the patient's pulse at the time. The practitioner should always remember that he has not only the debility of the disease to counteract, but the putrescent state of the blood to correct, in the patient suffering from typhus, and that for the latter purpose the farinaceous foods and beef tea, or mutton broth, are the best agents he can use; and where these cannot be given often enough, or in sufficient quantity, by the mouth, they should be thrown up the bowels every six or eight hours by injection. Drinks in abundance should be supplied, and the patient allowed a free use of acid fruits, such as grapes, oranges, apples, or whatever fruit may be in season. Personal cleanliness, frequent change of linen, and free ventilation are most important aids in the cure of typhus, and those injunctions laid down under the head of Sick-room should be implicitly carried out. See SICK-ROOM.

U

U is the twenty-first letter of the alphabet, and though used occasionally as an abbreviation, has no signification in a medical sense.

ULCER.—An ulcer, in surgical language, is a solution of continuity in some of the soft parts, having a secreting surface, from which pus, either pure or unhealthy, is discharged. Ulcers may be situated in the skin or muscles, open to the surface, or in some internal organ, only discharging into the cavity which contains them. Ulcers are divided into the *local* and the *constitutional*, and the local again into the *simple*, the *irritable*, the *indolent*, and the *specific*.

Ulcers are generally the result of a low state of vitality, and are usually found in persons advanced in life, of a sluggish habit of body and a torpid circulation; and though they may occur in any part of the body, they most frequently take place on the legs. Women are more subject to ulcers than men. All wounds which refuse to heal by the first intention, and can only be closed by the secretion of pus, by granulation and contraction, are in effect *simple, healthy ulcers*, which are raw surfaces, of an indefinite size, shape, and depth, discharging healthy pus or matter.

In the *treatment* of this kind of ulcer, all that is necessary is to keep the surface clean, protected from injury, and allow nature to perfect the cure, merely absorbing on a piece of clean lint the excess of pus thrown out.

IRRITABLE ULCERS.—These are ulcers where the action of the vessels of the part is too violent to enable the ulcers to form healthy granulations, proceeding either from the state of the part itself, or from some cause in the constitution. The characters of an irritable ulcer are a jagged margin, terminating in sharp, overhanging edges; the bottom of the ulcer is full of small pits and elevations, covered with a whitish, spongy substance, on which floats a thin, ichorous discharge; the pain attending it comes on in paroxysms, principally in the evening or at night, and is often extremely severe.

The *treatment* of this kind of ulcer requires constitutional remedies, such as the following pills and lotion. Take of—

Calomel	24 grains.
Powdered opium . .	12 grains.
Powdered ginger . .	10 grains.
Extract of henbane .	sufficient to

make a mass, which is to be divided into twelve pills, one to be taken night and morning. Take of—

Camomile tea	1 pint.
Sugar of lead. . . .	1 drachm.

Make a lotion, which is to be applied, slightly warm, on piline every half-hour, or simple warm water may be used. This kind of ulcer very often takes place on the ankle, or on the skin covering the front of the shin.

INDOLENT ULCERS.—These ulcers may proceed from a simple want of power in the part, or they may arise from a constitutional weakness, or a local debility may lead to constitutional torpidity; this is the case in those indolent ulcers so often met with in aged females, when loss of power has, in the first instance, led to an ulcerated leg at the cessation of the catamenia, and continued the ulcer for several years afterwards. These are the most formidable of all the kinds of ulcers, and, on account of their chronic state and constitutional support, are both extremely difficult to cure, and dangerous to the patient's health if abruptly healed or dried up. The characters of the indolent ulcer are an irregular margin, with thick, prominent, smooth, and rounded edges; the granulations are large, flabby, smooth, and glossy, and the pus thin and watery, containing a large proportion of coagulable lymph, which is often diffused over the granulations, to which it adheres, giving them a coated appearance. Indolent ulcers are sometimes of great size, involving more than one-half of one side of the leg, and often of the most extraordinary shape, large portions of the margin running like peninsulas into the centre of the ulcers, the coated granulations looking like islands in the deep cavity of the sores; the limb, too, is generally œdematous, and the swollen margins occasionally rise above the surrounding level. The indolent ulcer is seldom painful, unless injured, or irritated by long standing on the limb; The discharge varies in colour with the state of the patient's health, and in all cases has an offensive smell.

The *treatment* in this form of ulcer must be chiefly constitutional, the aim of the surgeon being to convert the indolent into an irritable ulcer, and then lead the irritable into the simple or healthy ulcer. The patient should be placed on a full and nutritious dietary, with half-a-pint of stout three times a day; the bowels are to be regulated by one or two compound colocynth pills given occasionally, and the following mixtures taken in succession:—

Tonic Mixtures.—No. 1. Take of—

Infusion of roses . .	6 ounces.
Quinine	18 grains.
Diluted sulphuric acid.	30 drops.

Mix: two tablespoonfuls to be given every six hours till finished, when the next is to be taken in the same quantity, and at the same times.

No. 2. Take of—

Cinchona bark	½ ounce.
Gentian root	2 drachms.
Cascarilla bark . . .	1 drachm.
Boiling water . . .	8 ounces.

Infuse for six hours, strain, and add—

Diluted nitric acid . .	25 drops.

Mix: to be taken as above.

No. 3. Take of the—

Tincture of iron . .	2 drachms.
Infusion of quassia . .	5½ ounces.
Syrup of red poppy .	½ ounce.

Mix: one tablespoonful, in a little water, to be taken every three hours. On completing the third mixture, the patient should recommence with No. 1, and continue in the same order as before.

For the first two or three days the ulcer is to be poulticed twice a day with warm bread and water, so as to cleanse off the coagulable lymph, and expose it fully to inspection. If the poulticing should not remove the coating from the granulations, cloths dipped in a solution of bluestone, made with two grains of bluestone to each ounce of water, are to be applied for a few times, and the poulticing renewed till the ulcer is made clean. The lotion is then to be applied as before, beginning with, two or three times a day, a piece of greased rag being laid over the lotion to prevent its *sticking*, the whole covered with oiled silk, and a turn or two of loose bandage passed round the limb to keep the dressing in its place. The leg is to be rubbed all round the ulcer with the palm of the hand every time the dressings are removed, to excite the absorbents and reduce the œdema. After a few days it will be requisite to increase the strength of the lotion to 3, 4, or, if necessary, to 6 grains to the ounce. The ulcer should be as lightly covered as possible, and the more it is exposed to the air the sooner will it heal, and the limb recover its tone and strength.

Ulcers require a frequent change of application from one stimulant to another; thus lotions of bluestone, greenstone, white vitriol, and lunar caustic, should be used in succession—a weak lotion very often effecting a rapid cure when it follows the employment of a strong one. In severe and old-standing indolent ulcers, the best results are often obtained by applying a blister over the whole ulcer, the inflammation induced by the blister affording the stimulus required to excite a new action, produce absorption, and the formation of healthy granulations. Sometimes the granulations shoot up with large and watery heads, overtopping the margin of the ulcer; these red and flabby granules are popularly known as *proud flesh*, and often require to be touched with bluestone, or caustic, to reduce their bulk to natural limits. Burnt alum reduced to powder, or red precipitate, are occasionally dusted over them for the same purpose. When the more powerful stimulants have failed to produce a healthy healing action in the ulcer, that effect is sometimes obtained by sprinkling finely-powdered lump sugar over its surface, and washing it afterwards with cold rum or gin and water: friction, occasional shocks of electricity through the limb, stimulating lotions, with a good dietary, and giving the limb plenty of air, will, sooner or later, always insure the healing of an indolent ulcer.

SPECIFIC ULCERS are ulcers attended by some specific diseased action, either local or constitutional, and are generally small, shallow, circumscribed sores, of a red and irritable appearance, and causing considerable inconvenience and pain, of a hot and burning description. There are many varieties of this order of ulcers, as those that yield to a course of mercury, those cured by hemlock, those healed by arsenic, and those by salt water, &c. The best example of this order of ulcers is that small and painful sore known as *chancre*, for which see the letter "V."

Formerly ointments were regarded as the best applications for ulcers; they are now, however, considered as more hurtful than beneficial, the grease fermenting by the heat of the limb, and adding to the irritation and unhealthy action. Lotions, cold water, and emollient poultices, are now considered the best local remedies. Some surgeons treat indolent ulcers by drawing the edges of the ulcer together by a series of slips of adhesive plaster, as if closing the lips of a wound, and then applying several yards of bandage to support, by an equal pressure, the whole limb. Whatever benefit the bandage may afford as a support is more than counterbalanced by the relaxing heat it causes; for it should always be remembered that the ulcer requires exposure to the air to heal effectually, and the limb frequent friction to restore its torpid circulation,—benefits incompatible with the use of a bandage and a casing of adhesive plaster. See WOUNDS.

ULCERATED OR SORE MOUTH.—A disease of the mouth to which the children of the poor, and of the ill fed and dirty, are particularly liable. See CANKER.

ULCERATION.—An unhealthy action, resulting in the formation of an abraded surface secreting pus, more or less pure or healthy. Ulceration of the bones is a disease always sure to result in *necrosis*, or the death of the bone. Ulceration of the soft parts is followed by the formation of an ulcer.

ULMUS CAMPESTRIS.—The botanical name of the elm tree, the bark of which is sometimes used as a tonic and bitter.

ULNA.—The name given by anatomists to the inner bone of the forearm, and the larger of the two.

UMBILICUS.—The navel, a medical term applied to that portion of the abdomen to which, in fœtal life, the umbilical cord, or navel string, is attached, entering the child's body, to carry on the connection between the mother and the fœtus.

UNCIA.—An ounce, the twelfth or the sixteenth part of a pound, according to the standard used. By the weights and measures, as regulated by the late British Pharmacopœia, the ounce is the sixteenth part of a pound, and consists of 437·5 grains solid, while the fluid ounce is composed of eight drachms.

UNCIFORM.—The name given by anatomists to a small bent bone of the wrist, in consequence of its hook-like appearance.

UNFERMENTED BREAD.—Bread made without leaven has always been considered not only as less palatable than fermented bread, but as considerably less nutritious. This belief, however, has been lately shown to be an error and delusion, and that of the two, unfermented bread is lighter, easier of digestion, and more nutritious, than the best made bread with the best yeast. See article FOOD.

UNGUENTUM.—An ointment. The word is sometimes used for the strong mercurial ointment.

UNGUIS.—The name of a small collection of matter under the cornea of the eye, so called from the abscess resembling the nail of the finger.

UREA.—One of the proximate principles of the urine, and the salt on which that secretion depends for its high specific gravity. On the Continent this substance is used medicinally as a diuretic in cases of dropsy or affections of the kidneys, the dose of the crystals being from ten to fifteen grains.

URETER.—A long membranous pipe-like canal, which, extending from the kidney to the bladder, conveys into that organ the secretion distilled from the other. The ureter on either side proceeds from the pelvis of the kidney, of which it is the continuation (see KIDNEY, *cut*), and descending through the abdomen, enters the bladder at the fundus of that organ, and near what is called the *trigon*. See BLADDER, *cut*.

URETHRA.—The name given to the canal by which the urine, received into the bladder by the ureters, is discharged from the body. In the female this passage is naturally very short, and at the same time more dilatable than that in the male, consequently is not liable to the diseases to which the same organ is subject in the male, in whom the urethra is divided into three portions—first, that portion which passes through the prostate gland, and called the *prostate;* second, that portion between the anus and *symphysis pubis*, the *membranous;* and third, the remaining portion, from the bulb to the extremity of the *glans*, or the *spongy* portion. The principal diseases to which the urethra is subject are the inflammatory state known as *gonorrhœa*, or gleet; a contraction of its passage, as in stricture, of which there are three kinds,—the permanent, spasmodic, and mixed. For the treatment of this disease see STRICTURE, and FISTULA.

URINE.—The urine is a transparent, light straw-coloured fluid, with an aromatic odour, a bitter taste, and a slightly acid reaction; as it cools it loses its aroma, and its smell becomes heavy and urinous; after remaining for a few days its odour undergoes another change, and becomes ammoniacal; the water itself has now an alkaline reaction, and deposits white crystals of phosphate of ammonia and magnesia. The amount and colour of the urine voided varies with the time of day and quantity of fluid imbibed, being darker in the morning, when but little drink has been taken, and lighter in colour according to the amount of fluid drunk. Urine varies from twelve to twenty-five per cent. in its weight over water, healthy urine averaging 1,015 to 1,025 specific gravity, water being regarded at 1,000: the quantity voided in twenty-four hours differs greatly, both with the same person and at different times of the day; more is made in cold weather than in hot, and in the day than the night. In midwinter the amount is 51⅓ ounces, and midsummer 48⅓ ounces; the average for the whole year of different persons being about 41 ounces every twenty-four hours. The quantity of solid contents of the urine is about six per cent., amounting daily to 2⅓ ounces avoirdupois. The urine voided in the morning is of a higher colour, but purer than that emitted during the day; the urine passed after taking food is the most acid; that while digestion is going on becomes almost alkaline, and with an animal diet there is a diminution of acidity, while with a vegetable diet there is an excess of acid. A chemical analysis of healthy urine shows the presence of 67 parts of solid matter in every 1,000 parts of liquid urine. Of these 67 parts, 30 are *urea*, 17 lactates, 18 alkaline and earthy salts, such as the phosphates, sulphates, chlorides of soda, potass, and ammonia, 1 of phosphate of magnesia and lime, and 1 of lithic acid; total, 67.

The density in disordered urine, or that taken from an individual suffering from disease, is increased. As in healthy urine the specific gravity is never lower than 1,005, or higher than 1,033, it follows that whenever the density falls below 1,005, or rises above 1,033, it is a convincing proof that the urine is greatly disorganized. It is the presence of urea in excess that gives the specific gravity to urine. In some cases of disease, as in Bright's disease, and certain nephritic affections, there is a large proportion of albumen in the urine, causing it to coagulate on the application of heat, and throw down a white flaky precipitate on the addition of nitric acid. Sometimes there is a redundancy of sugar, when the urine shows a specific gravity ranging up to 1,050. Whenever the specific gravity of urine exceeds 1,025, the physician should be on his guard, and watch all the symptoms narrowly as they occur in his patient. The way to test the quantity of solid matter in the urine is to multiply the gross amount of urine voided in the day by the specific gravity above 1,000; thus, if the patient has voided 312 ounces of urine at the specific gravity of 1,050, the 312 are to be multiplied by 50, which would give 15,600, and multiplying this by the product 000.233, we obtain 36·3 ounces, or 36¾ ounces of solid matter per diem. Besides the salts natural to it, urine occasionally contains substances in such redundancy that it is unable to hold them in solution, and they are consequently thrown down. The first class of these precipitates generally consists of lithic acid, lithate of ammonia, and earthy phosphates; of these the most important are, first, *the red crystalline sediment*, composed of lithic acid and colouring matter; secondly, *crystalline sediment*, consisting of the ammoniaco-magnesian phosphate; thirdly, *white amorphous sediment*, consisting of triple phosphate, and phosphate of lime; fourthly, *pink sediment*, composed of the lithate and phosphate of lime; fifthly, *yellowish sediment*, composed of lithate of soda, ammonia, and earthy phosphates; and sixthly, *reddish brown or lateritious sediment*, consisting of alkaline lithate, chiefly of soda and earthy phosphates. The second class comprises such animal products as are not naturally found in the urine, and usually show themselves in the form of a red precipitate, and may contain *pus*, *mucus*, *bile*, *chyle*, *milk*, *semen*, and *phosphorus*. There are several other urinary deposits, such as oxalate of lime, generally induced by drinking claret or champagne, and partaking largely of rhubarb, sorrel, and similar vegetables; but on these matters it is unnecessary further to enlarge. It should be remembered that many substances taken as food tinge the urine of the colour of blood, and may thus deceive the observer, if not previously aware that madder, beetroot, rhubarb, poppy, cherries, mulberries, and logwood, will produce that effect. The less a person perspires, the more water he generally makes; females, especially those of a nervous temperament, are in the habit of making large quantities of a pale urine, but at a low specific gravity. A healthy man is in the custom of secreting from 25 to 35 ounces of urine in every twenty-four hours: the quantity, however, must depend—as we have already stated—on the amount of fluid actually drunk, or imbibed into the system in that time.

The secretion of the kidneys is collected, drop by drop, in the bladder, till that organ, becoming uncomfortable in consequence of the distension, or irritated by the acridity of the contents, produces those warning symptoms which admonish us at once to relieve it of the cause of irritation. The retaining power of the bladder—as well as its capacity—is greater in women than in men; it is always, however, dangerous to overtax the endurance of the organ by keeping it for any length of time distended. Such accidents have led to paralysis of the bladder, retention of the urine, and spasmodic contraction of the neck of the bladder.

URINARY CALCULI.—By this term is understood the various kinds of deposits from the urine found in the human bladder, or in the urine of those persons subject to this kind of disease. Surgeons have divided urinary calculi into three varieties;—first, *the pulverulent or amorphous sediment*, always existing in a state of solution, and only thrown down as the urine begins to cool, when it is precipitated in the form of a fine brown or pink powder, and consists of the lithates of ammonia, soda, and lime. This is commonly known as the red or pink sand; secondly, *crystalline sediment, or gravel.* This is generally voided in the form of minute grains or crystals, and is either composed of lithic acid, of triple phosphate of ammonia and magnesia, or of oxalate of lime. This sediment has received the name of white sand. Thirdly, *solid concretions*, or calculi proper, formed of an aggregation of these sediments. Calculi are sometimes, but not frequently, formed in the kidneys, and are occasionally found there and in the ureters, on their way to the bladder, where they attain their full size. Urinary calculi are of all sizes, shapes, and colours. The average dimension of a calculus may be taken as that of a chestnut, though sometimes exceeding the bulk of a large egg; the greater the number of calculi in the bladder at one time, the smaller will be the dimensions of each. The most important of the varieties of urinary calculi are, first, the *lithic acid calculus;* secondly, *lithate of ammonia calculus;* thirdly, *bone earth, or phosphate of lime;* fourthly, *triple phosphate of lime and magnesia;* fifthly, *fusible calculus;* sixthly, *mulberry calculus, or oxalate of lime;* seventhly, *cystic oxide calculus;* eighthly, *alternating calculus;* ninthly, *compound;* tenthly, *calculus of the prostate gland;* and eleventhly, *carbonate of lime calculus.* Some of these calculi are of extreme density and remarkably hard; others are so soft that they crumble to pieces under the slightest pressure: their density, size, shape, roughness or smoothness, are physical features with which the surgeon only has to do; all that concerns the non-professional reader are the *symptoms* of calculi, or stone in the bladder. These begin with weight in the loins and back, and a dragging pain, gradually extending to the groin in females, and to the testicle in males, with an irritation felt at the point of the penis in the latter, often relieved by pulling the foreskin; frequent desire to make water, the operation being attended with pain and smarting; the urine is often bloody, and the stream in voiding is frequently arrested by the stone getting before the pipe of the *urethra.* Motion, especially of a jolting nature, such as riding in vehicles, greatly increases the pain, while rest and the horizontal position always afford relief. Sometimes a small calculus is voided with the water, or a discharge of gravel takes place, in which case there is always a cessation of the symptoms for some time afterwards.

The TREATMENT of stone can only be effectively carried out after a close examination of the urine, and by a steady observation of the symptoms. In some cases the repeated exhibition of the bicarbonate of potass, or soda water, surcharged with carbonic acid, has the property of neutralizing the calculi, and leading to their final solution. In the same manner, the steady employment of the mineral acids, when the calculi are strictly earthy, has the effect of causing their decomposition. In general, however, there is no radical cure for stone but by an operation; on this part of the subject the reader is referred to Lithotomy and Lithotrity, and the article Gravel.

URINARY FISTULA. — This is a sinous opening in one of the urinary passages, and generally commences with a small pimple, which being probably unnoticed, degenerates into a trifling abscess; the matter, however, burrowing below the cuticle, a sinus or fistula is eventually formed. See FISTULA.

URINARY ORGANS.—Under this head are comprised two secreting organs, one receiving organ, two connecting tubes, between the springs and the reservoir, and one canal, or main outlet. The two secreting organs are the kidneys, the structure and function of which we have already explained; the reservoir or receiving organ is the bladder, also fully treated of; while the two connecting and excretory canals, the ureters and urethra, have received the attention their several uses entitle them to.

URINARY ORGANS, DISEASES OF.—The affections appertaining to the organs coming under this group are principally confined to those attacking the kidneys and the bladder, such as suppression of the urine in the first case, and incontinence and retention of urine and strangury in the second.

The other diseases of both kidneys and bladder have already been referred to under their proper names.

SUPPRESSION OF THE URINE (*Ischuria*).—This is primarily a disease of the kidneys, the result of blows, falls, or some sympathetic action, giving rise to the following series of—

Symptoms.—Languor, restlessness, a dull, heavy weight in the loins, extending to the thigh, with heat of skin, a flushed face, headache, nausea, and vomiting. On the third day a general puffiness or œdema is perceptible over the body, particularly over the face and head, attended with drowsiness, which on the fourth day amounts to coma, and, unless relieved in two days later, generally terminates in the death of the patient.

The *treatment*, when such important organs are concerned, requires not only despatch, but the aid of instant and able medical treatment. The means in general required are bleeding, either from the arm or by cupping-glasses over the region of the disease, the warm bath, diaphoretic doses of Dover's powder and antimony, with mild purgatives and castor oil enemas.

INCONTINENCE OF URINE (*Enuresis*).—This is a disease which may arise from functional or mechanical derangement of the bladder, or from irritation in the womb or bowels: pregnant women, and children affected with worms, are consequently the persons most troubled with this disease. With children the incontinence is generally at night, in their sleep, when the water either escapes in a stream, to the entire emptying of the bladder, or it comes away in driblets. With females it is chiefly by day, and either passes off in gushes or oozes out in small quantities occasionally,—in either case causing much discomfort, excoriation, and annoyance. Sometimes, but rarely, the disease is the result of spasm of the muscular coat of the bladder; in such cases the *treatment* is both simple and effectual. Place a suppository of 3 or 4 grains of opium within the *anus* for one or two nights, and the cause will be removed. In the case of pregnant females, as much rest by day in the horizontal position as possible should be taken, and the bowels kept open by a spoonful or two of lenitive electuary, by a small dose of castor oil, or by a little magnesia and rhubarb. For children, when cutting the teeth is the exciting cause, keeping the bowels open, lancing the gums, and a warm bath at bedtime are the only means that can be safely employed. When the children are older, however, and it proceeds from worms, the bowels are to be kept regularly open, the hips and loins sponged with cold water and vinegar before going to bed, and a dose of the following mixture given each night. Take of—

Tincture of cantharides	50 drops.
Tincture of henbane .	1½ drachm.
Syrup of red poppies .	2 drachms.
Mint water	1 ounce.

Mix: a teaspoonful to be given at bedtime to a child from four to eight years old, and a dessertspoonful to one above that age. The nurse at the same time should be careful the child does not take much if any fluid, for at least two hours before bedtime, and ascertain that the bladder has been emptied before going to rest.

RETENTION OR DIFFICULTY OF VOIDING THE URINE (*Dysuria*).—This very painful affection may arise suddenly, or be the consequence of inflammation of the coats of the bladder; it may arise from paralysis, or spasm of the neck of the bladder; or it may proceed from gonorrhœa, gravel, stone in the bladder, and many other causes.

The *symptoms* of this disease are generally too evident to require explanation; the desire and incapacity to make water are features of the complaint sufficiently marked to indicate the disease whenever it occurs.

The *treatment* should begin with the warm bath or the hip bath in all cases, those being the most effectual means that can be used; where these cannot be obtained, hot fomentations to the region of the pubes in both sexes should be adopted; if these fail, cold water should be dashed on the abdomen, a suppository of 4 grains of opium placed up the fundament, and 10 or 15 drops of the muriated tincture of iron given in a little sugar and water every half-hour. When the urine is scanty and high-coloured, copious draughts of barley water, with a few grains of nitre, should be taken frequently. As retention of urine very often depends upon a constipated state of the bowels, attention must be directed to that quarter, and by a dose of croton oil and calomel, efforts made to unload the obstructed bowels.

STRANGURY. — This is only a very severe form of *dysuria*, or retention of urine, generally the result of disease, or an excessive dose of cantharides or some strong stimulants, and requires warm diluent drinks, the warm bath, and the same general treatment as for dysuria.

In most of these affections of the urinary organs the soothing system, such as the warm bath, opium by the mouth, in the form of Dover's powder, or *per ano*, as a suppository, will be found the best and most speedy means for relief or cure. Sometimes, however, where there is a spasmodic stricture of the neck of the bladder, or a degree of inflammatory action existing, it is necessary to apply six, eight, or even a dozen leeches on the *perinæum*, or the part between the pubes and the anus. When the warm bath cannot be obtained, hot fomentations will have the same effect, though not to the same extent. With females, however, it often acts quite as serviceably, especially if a bottle of hot water wrapped in flannel is laid close to the body. Finally, to repeat in abstract, in cases of *incontinence* small doses of the muriated tincture of iron, with quinine three times a day, and the cold hip bath every morning: in cases of *retention*, the warm bath or hot fomentations, with occasional leeches: when the case is one of *suppression*, the warm bath, friction over the loins with camphorated oil, frequent draughts of barley water, with a few grains of powdered nitre, or linseed tea with nitre, and such a mixture as the following, employed. Take of—

Dover's powder . . .	40 grains.
Powdered nitre . . .	15 grains.
Camphor water . . .	5½ ounces.
Tincture of squills . .	2 drachms.
Sweet spirits of nitre .	3 drachms.

Mix: one tablespoonful to be taken every three hours.

In cases of retention of urine, whether the result of the causes which induce *dysuria*, or from paralysis of the bladder, it is very often necessary to pass a catheter and draw off the contents of the bladder, and even sometimes to keep the instrument for some time in the passage. Great care is always necessary in passing bougies or catheters along the male urethra, as the lining membrane is so tender, that if much force is used the instrument may be driven through a fold, and what is called a false passage made into the bladder. Occasionally the difficulty in passing the catheter is so great, and the patient's sufferings so acute, that to avoid the danger of mortification the surgeon is compelled to puncture the bladder through the *rectum*, or else over the pubes, and by that means relieve the distended bladder from the irritating secretion it contains. The presence of any large quantity of gravel or a stone *calculus* in the urine is generally indicated by an irritation or itching at the end of the *præputum* or foreskin in males, and the *pudenda* in females.

The only other affection of the urine to which we shall here refer is that of—

URINE VOIDED WITH BLOOD.— This may arise from several causes: first, it may be a symptom of putrid or typhus fever; if so, it is a late and a serious symptom, showing the extreme debility of the body, and the giving way of the small bloodvessels, and is concurrent with the *petechiæ*, or discoloured spots on the surface. This condition of the urine can only be treated in accordance with the disease itself, namely, by antiseptics and tonics. Blood in the urine, however, most frequently results from strains, leaps, kicks, falls, or other external injuries.

If the patient is stout and in full health, it may be necessary to bleed and give astringents, such as the infusion of rose leaves, Epsom salts, and diluted sulphuric acid, with 10 drops of the tincture of iron and 1 drachm of paregoric in a wineglassful of camphor water every four or six hours; while as a beverage, one of the acid drinks recommended under the head of Drinks (which see) is to be taken repeatedly, a strict attention to quietude being observed till all evidence of blood has disappeared.

The most useful diuretics in the Materia Medica for these diseases are camphor, nitre (both the powder and sweet spirits), squills, and turpentine.

URINOMETER.—A delicate implement for testing the specific gravity of the urine.

URTICARIA.—The name of a cutaneous eruption appearing in large splashes or wheals, and attended with a smarting heat or itching,—Nettle Rash, which see.

URTICATION.—The stinging of the skin with nettles. A name given to the inflamed appearance produced on the skin by flipping it with a bunch of nettles—a practice sometimes adopted by medical men is cases of paralysis of the leg, arm, or any particular part of the body, in the hope of restoring animation to the torpid muscles, and vigour to the sluggish circulation. See NETTLES.

UTERUS.—The Latin and professional name for the Womb, which see.

UVA.—A grape.

UVÆ PASSÆ.—Dried grapes, raisins.

UVA URSI.—The botanical name of the creeping plant known as the Whortleberry, which see.

UVEA TUNICA.—A name given by the older anatomists to the painted side of the iris. See EYE.

UVULA.—The little piece of red, spongy-looking flesh that hangs down from the back of the palate between the tonsils. This little organ, the uvula, is only a portion of the soft or pendulous palate, and generally suffers in whatever inflames or irritates the mouth. The function the uvula performs in the body is that of a valve, to cover, during the process of *deglutition* or swallowing, the posterior outlets from the nostrils. Under Larynx and Organ of Voice we have shown how the entrance into the windpipe at the *rima glottis* is closed, during the act of swallowing, by a small cartilage called *epiglottis* falling on it like a trap-door, to prevent food or drink passing down the air-tubes; the uvula in the same way closes the passages into the nose, and prevents food from passing into the nostrils. The uvula is very subject to relaxation during cases of severe cold, and often becomes so elongated as to interfere greatly both with speaking and breathing. In such cases, when the inconvenience is only slight, a piece of sal prunella placed in the mouth for a short time will often effect a cure by *causing* a contraction of the part; generally, however, astringent gargles are requisite, such as a decoction of red sage with alum, or of logwood and alum; infusion of rose leaves and sulphuric acid, or a gargle of barley water with tincture of myrrh or kino, may be used with the same effect. Ulceration of the uvula sometimes takes place, and occasionally it becomes so chronically elongated, that it is necessary to remove or amputate a portion of the organ; before resorting to this operation, however, the nitrate of silver must be freely used, or the nitric or muriatic acids. Such cases must have the personal superintendence of a surgeon, and cannot be treated by a non-professional person.

V

V is the twenty-second letter of the alphabet, and as a numeral stands for five (5), and with a dash over (thus, $\bar{V}$), for 5,000.

VACCINATION is artificially inducing in the human body the disease known as cow-pox, professionally called *vaccina* or *vacciola*, and is effected by inserting a portion of the lymph or *virus*, taken in the first instance from a cow (in which animal the disease arises spontaneously), into some part of the patient's body, the object being to preserve the person so treated from the infection of small-pox. The value of this discovery (which enables the physician, by inducing a mild and benign disease into the system, to avert from the body a foul and pestilential one; or, should it arise, to rob it of its worst symptoms and nearly all its danger) is now so universally known and recognized, that it is only necessary for us to remind the reader that this great blessing was conferred on humanity towards the end of the last century by Dr. Jenner. Vaccination was for a long time considered a perfect specific against small-pox, and the blood once influenced by the lymph of cow-pox would, it was supposed, ever afterwards repel the disease of small-pox, however the patient might be exposed to its infection. Experience, however, has proved this to be a fallacy, and that persons, although twice vaccinated, may be attacked by the dreaded disease. It is, however, satisfactory to know that after vaccination, small-pox, if it should occur, is always mild, seldom pits the skin, and is never dangerous.

To insure the full benefit of vaccination the patient should be in perfect health at the time, and the lymph used perfectly fresh; and, if convenient, taken from an arm at the time of using. A couple of superficial scratches should be made by a lancet in the arm, about half an inch apart; the surgeon should then load the point of his lancet with the fluid lymph, and insert it in each of the abrasions or scratches, exciting the vessels to absorb the lymph by slightly scraping the part with the point of the lancet, care being taken not to induce bleeding—a mere redness, excited by scraping away the scarf-skin, is all that is necessary. On the second day the vaccinated parts appear red, as if about to fester; on the fourth day the places have become defined spots; and by the end of the fifth day assume the appearance of vesicles, surrounded by a bright pink areola: about the eighth day the vesicles attain their maturity, being circular in form, and about an inch in diameter, with a flat top and a slight depression in the centre; about the ninth day a slight degree of fever takes place, but only lasts for a few hours (this febrile action is similar to the secondary fever of small-pox). The pustule should be opened upon the ninth day, and the lymph, if not required for immediate use, collected on small square pieces of glass, or taken up on small slips of bone called points. A little magnesia and rhubarb, or an aperient powder, should be given when the pustule is opened, and if the arm is red and inflamed, a warm poultice applied for a few hours will relieve it. In general it is the twenty-first day before the pustule completely desquamates and the areola disappears, leaving a small depression or pit on the skin, which usually remains for life. A vesicle generally appears above each place where the vaccine lymph has been inserted, which from the third to the fifth days has a clear, pearly appearance, becoming opaque as the contents advance to maturity. The pustule should always be opened by the ninth day, and before suppuration can take place. Some persons vaccinate on both arms, making two or three punctures on each; this is unnecessary, two places on one arm being sufficient, and these must be so far apart that there can be no fear of their running together. In some constitutions the efficacy of the lymph lasts for life, in others the protective influence passes off in a few years; on this account it has been deemed necessary to repeat the vaccination at the age of puberty. To arrest the spread of that dreadful pest, small-pox, the Government has established many sanitary and legislative enactments; one of the most effective is the compulsory vaccination of every infant before it attains its third month, unless the medical man gives a certificate, stating the child's health is not in a state to admit of the operation, and stating *when* the patient is to be brought to him again. When the operation has been successfully performed, the surgeon is compelled to give the parents a certificate of the fact, which certificate must be preserved with the greatest care, as without it the person in after years will be unable to obtain any post under Government, or any situation of trust or emolument. The non-compliance with these regulations, or the exposing of convalescent small-pox patients, is regarded as a misdemeanour, punishable by fine and imprisonment. When the vaccination is performed from the dry lymph collected on the glasses or bone points, the virus must be made moist by a drop of warm water before using.

VACUUM.—A void, a cavity free even from atmospheric air. Vacuums, more or less perfect, are perpetually taking place in the living frame; when the infant draws the nipple the mouth is converted into a vacuum, and it is on the principle of the vacuum that the cupping-glasses act.

VAGINA.—A sheath. The anatomical name of the female passages—one, and the largest, leading to the uterus; the other, shorter and anterior, leading into the bladder, and called the urethra. The former passage, or the vagina proper, extends from the *vulva*, or external parts, to the neck of the uterus, and being composed of a firm corrugated membrane, is capable of considerable elongation. These circular corrugations, or *rugæ*, which at one time of life are a collateral sign of virginity, disappear after many labours, when the passage becomes perfectly smooth from the *vulva* to the *os uteri*. A thin, firm membrane extends almost completely across the vagina, cutting off all access to the uterus, but allowing the periodical secretion to escape from it by a semicircular opening below; this membrane is called the *hymen*, and only exists before marriage. The vagina is subject to many diseases, particularly to inflammation, ulceration, and weakening discharges, gleets, &c., the same as the urethra of the male, and from the same causes.

It is also subject to prolapsus, or a

falling down, especially in delicate females who have had many children in rapid succession. In such cases injections of oak bark, gall nuts, or other astringents are necessary, with the introduction of a pad or pessary to support the passage when restored to its proper situation. This organ is capable of very great distension, if the dilating power is gradual, as in childbirth. In ulceration or cancer of the mouth of the womb, it is sometimes necessary to distend the vagina by means of the *speculum*, to enable the surgeon to bring into view the disease, and apply his remedies to the part directly. The vagina is subject to a natural malformation, or what is called an imperforate vagina. The most common variety of this malformation lies in the hymen, which, instead of extending almost across the passage, entirely shuts it in like a perfect door: the less frequent form is where the female infant is born with a membrane extending across the *vulva* to the level of the external lips. On account of the possibility of such a malformation, it is the duty of the accoucheur to examine the infant carefully directly it is born, and if such exists at once to perforate and divide it. In the other form of imperforate vagina, the malformation is never suspected till the age of puberty, when the natural secretion is unable to find an outlet—a state of things often leading to serious consequences. Examination alone can prove the existence of this mischief, which when discovered may be remedied in a moment, and with little pain, by perforating the obstructing membrane by a pointed bougie, or by a trochar guided on the finger of the left hand. For treatment of *Leucorrhœa*, &c., see WOMB, DISEASES OF.

VALERIAN.—A very pungent, rank, and extremely offensive plant, possessing strong antispasmodic properties, on which account it is largely used in medicine in uterine and nervous diseases. The active principle of the plant depends upon a peculiar volatile oil, which combines with other substances, forming such compounds as the valerianate of iron and quinine. The more reliable preparations, however, are the infusion, made with 2 drachms of the root to 10 ounces of boiling water, the dose being two or three tablespoonfuls; the simple, and the compound or ammoniated tincture,—the dose of the former being from one to three teaspoonfuls, and of the latter from thirty to sixty drops. Some medical men give the powder of the [illegible] but it is generally too rank for most stomachs. In St. Vitus's dance and hysteria valerian has a very significant effect. On cats the effect of valerian is grotesque and singular, inducing extraordinary gambols.

VALVES are thin membranous substances, which, like single or folding doors, open and give free passage to a fluid in one direction, but forbid all return in the opposite course. Valves are found in the heart, in the aorta, in all the bloodvessels, in the stomach, and many other organs, and, considering their thin texture and vast importance, are among some of the greatest marvels in that wondrous piece of work, man.

VANILLA.—A delicious and aromatic fruit of the West Indies, which, on account of its sweet taste and peculiar aroma, is largely used for culinary purposes—to give flavour to creams, jellies, and chocolate,—and is also used by distillers to give piquancy to spirits and cordials. As an agreeable stomachic, it has been introduced into the Pharmacopœia in the form of the powder of the dried fruit (*pulvis vanillæ*), which, mixed with sugar, is given in doses of one drachm; and the tincture (*tinctura vanillæ*), which, from the benzoic acid it contains (making it resemble tincture of tolu), is serviceable as an expectorant, being given in doses of from thirty to sixty drops.

VAPOUR APPARATUS.—This is a modern invention, by which medicated vapour can be applied to any part of the body, though principally used in those affections of the scalp endangering the roots of the hair. It consists of a vulcanized india-rubber skull-cap, to fit tight, and retain the vapour given off from a reservoir placed over a spirit lamp.

VAPOUR BATH.—See RUSSIAN or TURKISH BATH.

VAPOURS, OR LOW SPIRITS.—This is a state of the system popularly known by the term nervousness; and if the non-professional part of society only used it, the term might be excused, but medical men who should know better employ it too often as the name of a disease. A late Duchess of Bedford, when at Bath, inquired what brought so many of her friends there, and being generally answered "nervousness," "the nerves," or "nervous affection," acknowledged that she came there for pleasure, and thanked God that she was born before nerves came into fashion. One object we have had in view in this work has been to show the reader the simple cause and effect of all ailments, as far as professional knowledge went, and to avoid the jargon of technicality, or the mystification of medical practice, and by laying the truth before the reader, leave to his own good sense the drawing of the proper inference; trusting that, like the Duchess of Bedford, he will be able to separate truth from cant.

Nervousness, then, is not a disease; there is, in fact, no such thing, but there is a state of physical and mental prostration or debility, the consequence most frequently of functional derangement, in which the person becomes bodily weak and mentally timid, and in which at times the imagination grows strangely perverted, the patient often believing himself converted into a glass bottle of so fragile a nature, that if abruptly handled he will break and be instantly annihilated; in some cases, again, the delusion is so strong, that the patient believes himself dead, lays out his limbs, closes his eyes, and assumes for hours, and even days, the semblance of a corpse. These and such like cases are generally called *hypochondriasis*. To undeceive such patients and effect a cure is a most difficult task. In one instance the delusion of death was so rooted in the patient's mind, that the physician, to save him from dying in reality from inanition, had the undertaker called in, the patient put in a coffin properly prepared for the occasion, and his obstinate patient carried to the churchyard, where a poor relative, whom the supposed deceased had greatly benefited, met the procession, and so vilified the memory of his patron, that the enraged patient, who was enabled to hear every word, burst out of his coffin, and, giving chase to the ungrateful detractor, ran till from exhaustion he fell to the ground, when he was taken home, put to bed, and in a few hours was perfectly recovered;—the powerful circulation of the blood, the mental excitement, and the perspiration consequent on the exertion of the chase, having effected a cure.

For the cases where patients fancy themselves dumb waiters, tables, teapots, or to have lost their legs, it is impossible to lay down any rule of medical conduct; the particular features of the case must suggest their own remedy.

We shall consequently return to the more ordinary form in which we find vapours, and commence with the usual—

SYMPTOMS, which begin with languor, oppressed breathing, a sense of heat at the stomach, listlessness, indifference, and want of energy to perform the most trivial duty, a melancholy sadness, and distressing forebodings of future events, with great fear and apprehension of personal danger from the most unreal causes, and so firm an opinion that his own view of things relating to himself is true, and must be realized, that no argument on the part of the physician can undeceive the patient's mind.

The CAUSES of this mental depression and physical weakness are almost always functional, and proceed from *dyspepsia*, biliary disturbance, enlarged liver, &c., each cause acting on a naturally melancholic temperament. The great fear in this disease is the probability of the case degenerating into confirmed *melancholia*, or melancholy madness.

The TREATMENT indicated is first to restore energy to the brain and nervous system, and then to remove the dyspepsia or the functional causes. The first is to be effected by change of scene, fresh society, and amusements, or by any means that will divert the patient's mind from his own case and imagined sufferings, by rural sports, moderate exercise, gaining his confidence, and condoling, but never by ridiculing his feelings or foibles, and finally by persuasive arguments, inducing him to attempt the measures suggested; only a portion of the scheme of treatment proposed being told to him at once. This is by far the most important, and also the most difficult part of the cure. The second, or medical treatment, lies in giving chalybeates or the mineral waters of Bath, Buxton, and Tunbridge Wells; tonics of quinine and iron, and antispasmodics, as those of camphor, valerian, opium, ether, &c.; mild aperients, and the occasional use of the tepid and cold bath; and in a carefully arranged dietary, the amount of wine or stimulants being regulated by the condition of the patient.

Where great debility, with a disinclination for all solid food, is experienced, a tablespoonful of the cordial medicine known as the compound tincture of cardamoms of the Edinburgh Pharmacopœia, taken about eleven o'clock in the forenoon, an hour before dinner, and again in the evening, will frequently act most successfully as a stimulant and stomachic. In cases where there is both apathy for food with indigestion, and great nervous depression, a teaspoonful of Gregory's powder in a little peppermint water, twice or three times a day, with a dose of the following mixture, will often be found highly beneficial, especially if assisted by an assafœtida pill at bedtime every third night.

Take of—

Carbonate of ammonia	1 scruple.
Camphor water . . .	4½ ounces.
Compound tincture of valerian	4 drachms.
Paregoric	1 ounce.
Tincture of lavender .	2 drachms.
Compound spirits of ether	2 drachms.

Mix: one tablespoonful to be taken every four hours, or two tablespoonfuls twice a day.

VAREX.—A knotted, discoloured tumour or swelling of the veins, seen through the cuticle. See VARICOSE VEINS.

VARICELLA.—The professional name of chicken-pox.

VARICOCELE.—A dark-coloured swelling of the scrotum, caused by an enlargement and distension of the veins of the part, as *circocele* is of the veins of the spermatic cord forming the *testis*.

VARICOSE VEINS, or *Varex*.—A surgical disease in which the veins in certain parts of the body are permanently distended with dark-coloured blood, and become so knotted, twisted, and enlarged, as materially to impede the circulation through them, causing by the accumulation of blood a swelling of an irregular, uneven appearance, sometimes only slightly protruding above the skin, at others forming tumours of considerable size. A *varex* is further noted by the distended and darkened colour of the veins leading to the swelling. Though they may occur in all parts of the body, varicose veins are usually found on the lower extremities, and more frequently in females than males: with the former it is often an accompaniment of pregnancy, particularly in the latter months, when it arises from the pressure of the fœtus on the iliac veins, or from much standing. With females, these varicose veins are often the origin of those ulcerations which in after life so frequently prove such annoying and permanent evils. Infants are sometimes born with a *varex* over the eyebrow, on the cheek, or some other part, when they pass under the general name of mother's marks, or *nævi*.

Many remedies have been devised for the cure of varicose veins, and excision at one time, and even a ligature round the trunk vein supporting the varex, have been adopted, but by no means with good or even safe results; the best treatment is a steady and equal pressure by means of a laced stocking, as much rest in the horizontal posture as possible, and care taken in keeping the bowels always open.

VARIOLA.—The name given by medical men to small-pox.

VAS.—The Latin name for vessel or tube, such as an artery or vein. In the plural the word is often used by anatomists, as in *vasa deferentia*, those vessels which convey the semen from the testes to the bulb of the urethra (see BLADDER, *cut*); *vasa inferentia*, and *vasa efferentia*, vessels which carry fluids *into* glands, and those which convey secretions *from* glands; *vasa vasorum*, the minute vessels which supply arteries and veins with nutriment; *vasa lacteæ*, and *vasa lymphaticæ*, names given to the lacteals and absorbents of the mesentery.

VASCULAR.—Full of vessels. A term generally applied by surgeons to parts inflamed, or in which many bloodvessels circulate.

VASTUS INTERNUS AND EXTERNUS.—The names of two muscles of the thigh employed in flexing the leg.

VEAL.—As an article of diet, especially for the invalid, veal is one of the most objectionable aliments that can be taken, unless, indeed, it is either boiled or stewed; then, of the young meats, it becomes perhaps the least objectionable. See FOOD.

VECTIS.—A lever; an instrument used in midwifery.

VEGETABLES.—The articles of an edible nature contained under this head are too well known to require any comment. In our article on Food we have shown that certain vegetable productions yield proximate principles completely analogous to those of animals, and that though a person may live for some time exclusively on a vegetable dietary, a perfect state of bodily and mental strength cannot be long sustained without some proportion of animal nutriment, should it consist of no more than a draught of buttermilk or a mouthful of cheese; in fact, perfect health is only to be secured by a due admixture of animal and vegetable foods.

VEHICLE.—An article in which a medicine is taken. The best vehicles for powders are jelly, treacle, honey, or syrup. Mixtures, when they require to be weakened, should be taken in mint, peppermint, or pennyroyal waters, plain water, or camphor water. Steel wine, or the muriated tincture of iron, should be given in syrup of orange peel. Oils may either be taken in mucilage, beat up with the yolk of an egg, or floating on spirits and water. A slice of orange, or a little parsley, are the best articles to cover the taste of medicine.

VEINS are long, hollow tubes, which rise by minute filaments, called capillaries, and increase in diameter as they proceed, from twigs to branches, and from branches to trunks; and form that system of vessels which carry back to the heart the blood which has been distributed over the body by the arteries. Veins, like arteries, are composed of three coats—an internal, middle, and external; but are thinner than arteries, and when emptied of their contents, lie flat and collapsed: the arteries, on the contrary, always remain open, and if cut transversely, show their cavities like broken pipes. Veins are longer than arteries, but want their elasticity; the veins of the extremities are all supplied with valves, to enable them to support the column of blood they are carrying upwards, and, at the same time, to prevent the regurgitation of the stream, and the descent or return, in whatever position the body may be placed, of the blood in their channels. The circulation of the blood through the veins is effected partly through the impulse of the heart, continued through the capillaries; partly by the contraction of the muscles, which, aided by the position of the valves, forces the blood towards the heart; partly also by the movements of respiration; and finally, as some physiologists suppose, aided by some power of suction in the heart itself. Anatomists have divided the venous system into three varieties—1st, *superficial veins*, or that network of small vessels which lead from the skin and surface generally all the blood carried there by the ramifying arteries; these small tubes, running under the integuments here and there as they grow into moderate sized branches, pierce the subjacent fascia, and, working their way between the muscles, finally terminate in the 2nd, or *deep-seated veins*. This division of the venous system commences at the extremities of the fingers and toes; and running beside, but in a contrary direction to the nerves and arteries, gradually enlarge till they merge into the trunks, and in this manner enter the body at the abdomen, where the two trunks of the right and left side eventually form the great ascending main, the *vena cava ascendens*, terminating in the right auricle of the heart. In like manner, the deep veins of the superior extremities, with those of the head and neck, augmented by the superficial set of veins of those parts, enter the thorax, and, under the names of subclavian and jugular veins, unite to form the descending venous main, the *vena cava descendens*, which also terminates, but by another orifice, in the right auricle of the heart. 3rd, *the sinuses*. These are veins formed by folds in a lining membrane, and, being either flat or triangular, are not only totally unlike veins, but contain much more blood than the ordinary tubular veins. The principal sinuses are in the brain, and composed of the membranes of that organ; and, passing out of the skull, receive the name of the internal jugulars, which, uniting with the external jugulars, eventually join the subclavians. The veins are sometimes divided into the *systemic* and *pulmonary*. By the first are understood the superficial and the deep-seated veins; and by the last, those four vessels which bring back from the lungs the blood purified by respiration, the arterial blood, and pour it into the left auricle of the heart. We have, under the headings of Circulation and the Lungs, referred to the anomaly of calling those vessels carrying arterial blood the pulmonary *veins*, and designating those that convey venous blood from the heart to the lungs pulmonary *arteries*. The function of the veins is not only to carry back to the heart the blood distributed to the body by the arteries, but to perform the duty of absorbents; or if the veins themselves do not absorb—for it is still a subject of opinion,—the capillaries, their minute radicles, do; and by this means, whatever is rubbed into or placed on the skin is carried directly to the heart, and by the circulation soon diffused over the system, as in the case of bites by venomous reptiles, the insertion of lymph under the cuticle in vaccination, and when croton oil is rubbed on the skin; for it is by this absorption, and circuit through the system by the blood, that we are enabled to account for the action on the bowels that soon after follows. Though the arteries are said to be the only secreting vessels of the body, there is one important exception with regard to those veins returning from the abdominal organs; for these, as they converge to form the *venæ portæ*, after ramifying through the liver, there secrete the bile. The colour of venous blood is of a dark purple, that of arterial blood a bright crimson. The blood of a vein may always be known by its colour, and from its flowing with an uninterrupted stream;

that of an artery will be instantly recognized by its bright colour, and issuing forth in leaps or jerks. When we wish to stop the flow of blood from an artery, pressure should be made *between the wound and the heart;* when it is desired to stop a bleeding vein, the pressure must be made *below the wound.* The upward direction of the venous current, and the downward course of the arterial stream, shows the reason why it is necessary in cases of poisoned wounds that a ligature should be tied *above* the wound, and between it and the heart, to prevent the virus entering the circulation. The last distinction between a vein and an artery is, that the latter pulsates, and veins do not. In bleeding from the veins, care should always be taken to cover the orifice with the thumb or a piece of lint before removing the pressure, so that no air may enter the vein; for if it should, and the vessel be near the heart, it would instantly prove mortal. The knowledge of this fact has been used by some French butchers, who avail themselves of it to kill their beasts more expeditiously, by inserting a blowpipe in a vein of the animal's neck, when, on giving a puff, the beast falls dead.

VEINS, INFLAMMATION OF.—The veins are remarkably liable to inflammation, and often from the most trivial cause, such as pricking the vein in bleeding, using a dirty lancet, from scratches with rusty nails, and very often from the absorption of the *virus* in dissections or at post-mortems, should the surgeon chance to wound his finger or hand.

The TREATMENT in this very serious accident is bleeding freely, giving calomel, kino, and opium till the mouth becomes affected, applying 12 or 20 leeches up the arm, with hot camomile and hemlock fomentations, and all the measures necessary in acute inflammation.

VEINS, SWOLLEN.—This is an affection with which pregnant women are much troubled towards the end of their time, and is generally worse towards night, when one or both legs become extremely hot and painful. As this state of the veins may lead to a more serious complaint, varicose veins, the limb should be rested as much as possible, and a laced or elastic stocking worn from morning till bedtime, the limb, when the stocking is removed, being gently rubbed with the hand and sweet oil. If a vein should burst, it must be instantly stopped by pledgets of lint, so as to make a sufficient compress, and a roller carried from the toes round the leg up to the knee; the bowels are to be kept freely opened, and the leg rested in the horizontal position.

VEINS, VARICOSE. See VARICOSE VEINS.

VELUM PALATI, or the Curtain of the Palate.—The anatomical name for what is known as the soft or hanging palate, or the fleshy roof of the mouth.

VENA CAVA ASCENDENS, AND VENA CAVA DESCENDENS.—The two great venous trunks which carry the blood to the right auricle of the heart, and so called from their great size.

VENA PORTA.—The portal vein, or large vein of the liver.

VENESECTION. — The cutting or the opening of a vein; the operation of bleeding.

VENEREAL DISEASE.—A virulent distemper, to which physicians give the several names of *syphilis, lues venerea, morbus Gallicus,* and the public formerly applied the name of the French or Great Pox, to distinguish it from *variola,* or the small-pox. This disease, under whatever name it may be called, is the result of man's vice and immorality, and is the direct penalty paid for the violation of the moral and physical laws of our nature. The most extraordinary fact connected with syphilis is, that though from the earliest age of man's existence the same causes have been in operation, there is no record of this disease till the comparatively recent epoch of the fifteenth century; and then, without any apparent warning, it broke out in the French camp before Naples in the year 1494, and had, by the beginning of the next century, spread nearly over the whole of Europe, astounding medical men by the novelty and virulence of its character, and alarming society by the fatal rapidity of its loathsome visitation. Some attributed the advent of this new and formidable disease to the licentious conduct of the French soldiery in this Italian campaign, and gave it the name of the French disease (*morbus Gallicus*); while others ascribed it to the Spanish sailors, Columbus about that time having just returned from his discovery of the new world, from whence it was said by one party to have been imported. The history of this disease being so completely hid in doubt and obscurity, we shall, without any further preface, proceed at once to describe its peculiarities and treatment.

By whatever name this disease may be called, it is generated in the female, and arises from a specific morbid poison, which, when applied to the human body, has the power of propagating itself, and acting both locally and constitutionally, and thus is capable of affecting the body in two different ways, and in very opposite degrees of severity; viz., locally on those parts on which the virus is first applied, and on the system at large, when by absorption the local virus has been taken into the blood and carried through the system.

Without pausing to examine if any and what are the special differences between the local and constitutional virus of the disease, we shall, without confusing the reader by professional technicalities and symptomatic differences, proceed to treat this disease in its natural order or sequence of showing itself, commencing of course with, 1st, its—

Local Phases.

Gonorrhœa, and its consequences.—The meaning of this word is, a discharge of seminal fluid from the urethra, the old surgeons believing such to be the case; but, as we have shown under Spermatorrhœa, this is a gross misnomer, the discharge that takes place in this disease being purulent, or muco-purulent.

Gonorrhœa usually comes on within the third and twenty-first day after intercourse. In very susceptible natures the symptoms, however, will show themselves in twenty-four hours, and in very sluggish natures have been as remote as six weeks.

The *symptoms* are heat and itching at the point of the penis, a tenderness of the *glans*, and soon after a running takes place, at first slight, and like a weeping rather than a discharge. As this increases in quantity, it is attended with pain and tenderness along the whole under surface of the organ. There is great fulness of the penis; the mouth of the urethra appears excoriated, and the whole surface of the glans seems inflamed, and even raw. As the disease advances, the stream of the urine is reduced in bulk, and the water, travelling along an inflamed surface, feels hot and scalding. The discharge that takes place, at first thin, becomes by degrees thick and purulent, and, according to the length of time it continues, changes in its colour from white to yellow and green, and also in its consistency, becoming finally a thin, watery gleet. This is the simplest form of the disease, in which the inflammation seldom extends above an inch and a half along the lining membrane of the urethra, and when rest, low diet, and mild remedies, will generally effect a cure. See Remedies.

Sometimes the inflammation runs much higher; the symptoms are then generally more severe; some of the small vessels of the urethra burst, and a discharge, stained with blood, follows, or else the amount of the sanguineous effusion is more considerable. At other times a perfect chain of indurated, painful elevations are felt along the under part of the penis, showing the inflamed state of the glands, while the vessels leading from them to the groin not unfrequently feel hard and knotty, and the inguinal glands become chronically affected, causing painful swellings in one or both groins, called by surgeons *buboes.* These buboes in *gonorrhœa* seldom go beyond the formation of those swellings, called sympathetic buboes; in a more aggravated state, however, they break, and become open abscesses, or suppurating sores. When a bubo does not take place, one or other of the testicles often becomes painfully distended, causing excessive inconvenience, and rendering all progression by walking very difficult. When these symptoms occur all together, the bladder suffers from the irritation, and the urine, becoming hot and irritable, is constantly appealing for discharge, adding, by its heat and acridity, additional pain to the patient. There are two other symptoms, which, though we have left them to the last, may occur almost at any time in this second stage of gonorrhœa: the one is an exhausting state of erection, which, keeping the muscles and vessels in a long and painful state of rigidity, may lead to mortification of the organ. The next though less dangerous in its consequences, is even more painful, and known as chordee—a state of rigid erection, where the member is bent like a hook, either upwards, downwards, or laterally, and which, for the time it endures, is excessively painful; and, generally occurring at night-time, or when the person is in bed, forms one of the most distressing of all the symptoms the gonorrhœal patient has to submit to.

Gonorrhœa in men is, as we have stated, a process of suppuration, taking place in a limited portion of the urethra, causing, by the irritation it provokes, a purulent discharge, varying in colour and consistency, attended with pain in making water, occasionally by bleeding from the urethra, painful erections, chordee, affections of the bladder, sympathetic bubo, and swelled testicle. With females, the disease, instead of being confined to the urethra, is situated in the vagina and the lips of the pudenda, causing excessive pain, and such extreme tenderness, that walking is performed with difficulty; while the discharge running down the perinæum often causes excoriation about the adjacent parts. For the remedies suited to these forms of the disease, see Discharge, under the head of Treatment.

Whether the local characters which, under the name of gonorrhœa, are usually denominated the primary symptoms, are, by absorption, translated into what are known as the secondary symptoms, or the constitutional form of the disease, is a question which it is here unnecessary to enter upon: that the one will induce the other is a well-known fact, but whether that is the ordinary or natural result is of small consequence in a practical point of view; and as it is still a subject of general controversy, we shall simplify the question by regarding the constitutional symptoms as the consequence of the local ones, or the secondary as being dependent on the primary.

2nd, THE CONSTITUTIONAL PHASE.

LUES VENEREA, or SYPHILIS.—The connecting link between the primary and secondary symptoms is almost always a chancre, or small ulcerated sore, occurring in some part of the genitals. Chancres are of different degrees of intensity or virulence. They sometimes result, as we have already stated, from the corroding influence of a gonorrhœal discharge, and rise early in the case; or they may occur much later, and are much more irritable and painful. Chancres are small, round, shallow ulcers, with a hard, firm base, and a red, angry-looking centre. Chancres breaking out on the frænum, or prepuce, are more hot and painful than when they take place on the firm, unyielding texture of the glans. In females they seldom occur in the vagina, but on the more sensitive portions of the *labia* and *vulva*. Chancres begin in the shape of a small, hard pimple, the top or scab of which is soon rubbed off. A second, and sometimes a third, is then formed, which being likewise rubbed off, the under surface assumes the round, shallow appearance that denotes it as a chancre. The continuance of a chancre generally results in the absorption of the virus or matter thrown out, which being carried by the lymphatic vessels to the nearest absorbent glands, as those of the groin, these soon after become swollen, hard, tender, and excessively painful, inducing what is called a bubo.

When buboes arise from simple gonorrhœa, they may present themselves in either or both groins; but when they follow from absorption of a chancre, the bubo formed will be in the groin nearest to the chancre. The formation of a bubo is regarded as the certain indication of the secondary symptoms, or the absorption of the venereal virus into the circulation, and the perfect establishment of syphilis, or *lues venerea.* The bubo usually begins with a sense of pain in the groin, where, on examination, the patient discovers a small hard tumour, which, according to the temperament of the person, will, with greater or less rapidity, enlarge, become hot, throb, and finally suppurate, terminating in a discharging abscess. The parts which are affected next in order are the skin, tonsils, nose, throat, mouth, and occasionally the tongue; and after these the periosteum, fascia, and osseous parts of the body.

VENEREAL ULCERS.—These are small circumscribed sores, somewhat resembling chancres, but differing very materially in their character and effect from them, and usually form in the throat, tonsils, uvula, and nose; at the same time parts of the skin are covered with dark, copper-coloured spots. Venereal ulcers, or sores, as they are called, are seldom attended with pain, being in that respect unlike chancres, and also in this, that the pus absorbed from them produces no swelling or bubo, as is the case in chancre.

The time at which these secondary symptoms take place varies from six to ten weeks, the skin gradually desquamating in a scurfy eruption. This affection of the mouth and throat is attended with great impediment of speech, loss of substance beneath the tonsils, and an increased flow of saliva. The last stage of the disease is the enlargement of the ligaments, fasciæ, tendons, and bones, forming swellings, hard excrescences, and *nodes;* but as some of the most celebrated of modern surgeons have declared that these scrofulous-like appearances never take place but when mercury has been given, and as that drug was formerly pushed to a frightful extent in what was called the treatment of this disease, the statement is very likely to be strictly true.

TREATMENT.

Before proceeding to state the kind of remedies to be employed in these two phases of one disease, it may be observed that the first gonorrhœal stage is the most difficult to cure, and the most tedious in its course; while *lues venerea*, or the secondary stage, is not only much shorter in its career, but much more easily and satisfactorily treated. The swollen state of the organ itself, and the inflammatory condition of the urethra, with the obstruction caused by the discharge, very soon reduces the calibre of the passage, diminishing the stream of water, causing it to split, scatter, and often to stop abruptly while being made; these, with slight pain, heat, and smarting, constituting the most prominent features calling for treatment in the—

First Phase, or Simple form of Gonorrhœa.—The first consideration in the management of this form of the disease must be directed to the state of the bowels, which throughout the whole case must be kept freely open by ordinary aperients or by the following pills and mixture. The irritation and heat in the part is to be assuaged by the use of the warm bath twice a week, by suspending the organ night and morning in a vessel of warm water, for ten or fifteen minutes, and by drinking freely during the night and day of an infusion of balm leaves, or else of barley water, 10 grains of powdered nitre being dissolved in every imperial pint (20 ounces) of either beverage.

Purgative Pills.

Take of—

Compound colocynth pill	2 scruples.
Calomel	24 grains.
Extract of henbane. .	1 scruple.

Mix, and divide into twelve pills. Two to be taken every night at bedtime.

Purgative Mixture.

Take of—

Epsom salts	1½ ounce.
Powdered jalap . . .	1 scruple.
Powdered ginger . .	10 grains.
Infusion of senna and camphor water, of each	4 ounces.

Dissolve and mix, and take three tablespoonfuls every morning an hour or two before breakfast. A suspensory bandage should be worn from the first, or a handkerchief so applied round the hips as to prevent the organ from hanging down, and as much rest given to the body as possible. A low diet of vegetables and farinaceous food is to be adopted through the whole of the inflammatory stage, and all animal fibre and stimulating beverages, such as wine, spirits, and malt liquor, avoided during the first stages of the disease. At the expiration of eight or ten days the doses of the purgative medicines may be reduced; one pill at bedtime, and two spoonfuls of the mixture night and morning, will in general be sufficient: at the same time, however, a piece of lint soaked in the following lotion is to be applied round the glans, or extremity of the penis, and a fresh piece of lint wetted in the lotion repeated to the part every three or four hours; care being taken to wash all discharge off the part before applying a fresh dressing, and to see that no exudation lodges between the glans and prepuce, or foreskin, as such want of care and proper cleanliness is likely to lead to *phimosis* and *paraphimosis*.

Lotion.

Take of—

Extract of lead . . .	1 drachm.
Elder-flower water . .	6 ounces.

Mix: to be used on lint as directed.

Should a perseverance in this treatment not subdue the gonorrhœa within a fortnight, or should other symptoms supervene about the end of that time, the patient must consult the treatment laid down for the—

Second Condition of the Disease.—For the better understanding of this part of the subject, we shall take each symptom in its ordinary sequence, giving the treatment peculiar to each in its proper place.

The Discharge.—Whether the exudation from the urethra is thick or thin, in large or in small quantity, this symptom must be treated for the first ten or twelve days by the purgative pills and mixture prescribed in the preceding section; by the use of the warm bath—when that is available,—and by the suspension of the organ in warm water, as already directed; by a careful attention to cleanliness, by the same regard to diet, by a free use of the diluents alluded to, by the employment of the lotion, and by following all the directions already given. If the accumulation of discharge arrests the free flow of the urine, or if the discharge becomes stained with blood, the mixture and powders prescribed below are to be taken, the former mixture and pills being suspended, or only an occasional dose of either taken, as the state of the bowels may require. Take of—

Mucilage	2 ounces.
Syrup of tolu	1 ounce.
Oil of cubebs	2 drachms.
Spirits of sweet nitre	3 drachms.
Friar's balsam	1 drachm.
Mint water	enough to make a 6-ounce mixture.

Mix, and make an emulsion: one dessertspoonful to be taken three times a day for two days, then one tablespoonful three times a day for three days, and afterwards a tablespoonful four times a day, or every six hours.

Take of—

Epsom salts, dried in an oven	2 ounces.
Powdered jalap	1½ drachm.
Powdered nitre	2 scruples.
Carbonate of soda	½ ounce.

Mix, and divide into twelve powders: one to be taken in half a tumblerful of camphor water night and morning. With the employment of these means, the lotion and all the applications already directed are to be continued. Should the gonorrhœa resist these remedies, the cubebs in powder must be given, which, from their stimulating action on the urethra, often effect a most satisfactory result. The following is the form in which they are to be taken.

Take of—

Compound tragacanth powder	2 drachms.
Powdered cubebs	4 drachms.
Carbonate of soda	1 drachm.

Mix, and divide into six powders: one to be taken in water three times a day, increasing the quantity of cubebs *one drachm* in each prescription, till the amount reaches an ounce. When the cubeb powders are taken, linseed tea, with 10 grains of nitre in each pint, should be substituted as a drink for the balm and barley water.

After a time the discharge becomes thin, and often of a greenish colour, when it is denominated a GLEET: in this chronic state, and often before it reaches that condition, injections become necessary, that local application proving often more serviceable than the constitutional remedies. Injections require to be employed with great care, and should always commence with the simplest article: for this purpose, an infusion of green tea should be first given, when, after being used for two or three days, the following lotions should be employed, taking them in the order in which they *are prescribed.*

Lotions for Injections.

No. 1. Take of—

White vitriol	6 grains.
Rose water	6 ounces.

Mix.

No. 2. Take of—

Sugar of lead	5 grains.
White vitriol	5 grains.
Water	6 ounces.

Mix.

No. 3. Take of—

Bluestone	4 grains.
Water	6 ounces.

Mix.

No. 4. Take of—

Sulphate of iron	6 grains.
Distilled water	6 ounces.

Mix.

No. 5. Take of—

Nitrate of silver	3 grains.
Distilled water	6 ounces.

Mix.

In using injections, not more than three syringefuls should be thrown up at one time; care must also be taken not to allow the lotion to pass into the bladder. To prevent it doing so, the organ is to be grasped by the fingers of the left hand close to the pubes, while those of the right are employed to guide the syringe. It must be remembered that *under no circumstances* ARE INJECTIONS TO BE USED DURING THE EXISTENCE OF CHORDEE OR A STRICTURE.

In conjunction with the use of the injections the following mixture is to be taken, should the cubeb powders not have the desired effect. Take of—

Mucilage	1½ ounce.
Balsam of copaiba	1 ounce.
Syrup	½ ounce.
Camphor water	3 ounces.

Mix: one tablespoonful to be taken every six hours. In the case of females, the warm bath, fomentations, and extract of lead lotion applied freely to the vagina is generally sufficient to check the gonorrhœa, except in severe cases, when the cubeb emulsion given with the local means will generally cure this phase of the disease.

CHANCRE.—This can seldom be interfered with till the head or scab has been rubbed off, when the whole surface is to be covered with grey powder; if this is repeated twice a day for a few times, the chancre will be destroyed, and without pain. This is a much more expeditious method than of the black or yellow wash so much in vogue among some practitioners, and quite as efficacious as the painful process of destroying the ulcer by means of caustic,—a method, however, sometimes necessary.

BUBO is an enlargement of the lymphatic glands, sometimes occurring in the groin, sometimes in the armpit, and is a hard, very painful tumour, about the size of an egg, slow of development, and extremely difficult to bring to a head or state of suppuration. The first object with a bubo is to endeavour to induce absorption, and dissipate it by resolution: for this purpose the patient must be enjoined as much rest as possible, and have the following lotion applied.

Take of—

Sal ammoniac . . .	½ ounce.
Nitrate of potass . .	1 drachm.
Sugar of lead . . .	2 drachms.
Camphor water . . .	20 ounces.
Vinegar	4 ounces.

Mix, and make a lotion: to be applied every two hours to the bubo on piline or linen cloths, alternating the lotion with bladders of pounded ice. When the patient is young and robust, it is often expedient to take six or eight ounces of blood from the arm, or, when there is much heat in the groin, to apply six or nine leeches over the tumour, encouraging the bleeding for a time with hot fomentations, and afterwards employing the lotion as above.

The bowels must be kept freely open by the pills and mixture previously recommended, and the cold continued as long as there is any prospect of reducing the bubo; when that hope is at an end, and the skin of the tumour becomes discoloured, hot fomentations of camomiles and poppy heads, or linseed meal poultices, are to be applied, and the swelling induced to suppurate as quickly as possible. As soon as the bubo is in a fit state for opening, an incision in the shape of a cross should be made where the skin is thinnest, the matter allowed to escape, and the poulticing or simple hot water fomentations continued, as in a common abscess, to encourage the discharge.

Some surgeons prefer opening a bubo by the caustic potass, but this method is much more painful than that by the lancet, and has no advantage over it. After a few days the surface will require stimulating, when the lotions given below must be used to close and heal it.

Take of—

Sulphate of copper . .	12 grains.
Water	6 ounces.

Dissolve: to be applied twice a day.

Take of—

Lunar caustic . . .	6 grains.
Distilled water . . .	6 ounces.

Dissolve. This lotion is to be used after the other, should the bubo be still open.

CHORDEE.—This, the most painful symptom of the disease, may occur at any stage, and is generally induced by heat or the warmth of the bed. The best treatment is the warm bath, or the sudden application of cold, when the attack is slight: thus, springing out of bed, and standing on the cold hearth, will often subdue the tension of the muscles, particularly if a wet towel is wrapped round the part. When the attack, however, is continuous, internal remedies alone can relieve it: for this purpose a suppository of 6 grains of opium should be placed in the *rectum*, and one of the following pills taken every hour till the rigidity is overcome. Take of—

Powdered camphor .	12 grains.
Powdered opium . .	6 grains.
Calomel	18 grains.
Extract of poppy . .	enough to make into a mass, and divide into six pills.

STRICTURE.—This condition of gonorrhœa, with its mode of treatment, we have described in its proper place, and have merely to observe here that the blocking up of the passage with the mucous discharge may, by causing the water to twist and scatter, lead to a belief that a stricture exists, when the urethra is perfectly sound in that respect.

Care must be taken that no injection is used when a stricture really exists.

PHIMOSIS and PARAPHIMOSIS, or a drawing tight of the prepuce, or foreskin, over *in front* of the glans, and a rigid contraction of the skin *behind* the glans, are two conditions to which some patients are liable in this disease, and being both rather serious in their consequences, require at once the aid of a surgeon.

THE TREATMENT of the complete secondary or constitutional form of this disease, when the *virus* has so engrafted itself in the system that the mouth and throat are affected, the skin discoloured, and the glands enlarged, and what is denominated syphilis, or *lues venerea*, is the condition presented, becomes almost exclusively constitutional, and calls for a steady and energetic combination of mercury, tonics, narcotics, purgatives, and free ventilation. Mercury, though no longer regarded as a specific in this disease, is found to exercise a certain corrective action on the syphilitic poison, and in a great measure to destroy its virulence. The patient's bowels must be kept well open during the whole treatment, by means of saline purgatives and colocynth pills; he must take as much exercise as possible in a dry, bracing atmosphere, and must learn to regard the compound decoction of sarsaparilla as a necessary beverage, to be taken three times a day, both as a vehicle for other medicine, and as a corrective diet drink. He must also take, with faithful punctuality, the following mercurial drops, a composing powder at bedtime, and a tonic mixture; besides these, should the mouth or fauces be ulcerated, he must submit to their being touched two or three times a week with diluted nitric acid, that the soft bones of the nose and palate may be saved from the danger of ulceration, and the disfigurement that would consequently take place; and finally, he should, once a week, take a mercurial vapour bath.

Mercurial Drops.—Take of—

Bichloride of mercury .	12 grains.
Spirits of wine . . .	7 drachms.
Tincture of lavender .	1 drachm.

Dissolve: three drops to be taken in a glassful of decoction of sarsaparilla three times a day for three days; then five drops taken in the same manner three times a day for three days more, and so on, every third day increasing the dose *two* drops till it amounts to twelve drops three times a day. The drops are then to be discontinued for six clear days, after which they are to be commenced again exactly in the same progressive manner from three to twelve drops, when they are again to be suspended, and after the allotted time in the same manner renewed, and so on as long as there is any necessity for their continuance.

Composing Powders.—Take of—

Dover's powder . . .	1 drachm.
Powdered guaiacum .	½ drachm.
Calomel	18 grains.

Mix, and divide into six powders: one to be taken at bedtime in a little gruel.

Tonic Mixture.—Take of—

Infusion of quassia . .	8 ounces.
Quinine	8 grains.
Diluted nitro-muriatic acid	30 drops.

Mix: a tablespoonful to be taken in water twice a day. For the syphilitic eruptions and nodes that sometimes take place, the mercurial vapour bath, with the above medicines and powders, and a gentle friction of the body with a towel, will, in general, answer all the purposes for which mercurial ointment and plaster are usually employed.

In concluding this subject we desire to impress on all those who read our directions with respect to this disease the necessity for perfect *cleanliness*, not simply in carefully washing away from the body any discharge that may collect, thus avoiding further impregnation, but to be particular that the water used for the purpose, and the cloths employed to the same end, are disposed of in such a manner that no other person can possibly use or become contaminated by them. The editor has himself met with three cases of venereal ophthalmia, resulting in the total loss of each affected eye, from the inoculation of the virus by the persons unknowingly using the water and the towel which had been carelessly left by patients affected with gonorrhœa. So virulent is the poison, especially when applied to highly organized parts, that too much care cannot be taken, both on the patient's account as well as others, to avoid so lamentable a misfortune.

VENICE TURPENTINE.—A thick, tenacious mass, semi-liquid, like treacle, in appearance, but in smell and feel resembling a fluid resin.

VENTILATION.—Of the full importance of ventilation in preserving the health of the body we have spoken at some length under Sick-room. To impress the subject still more firmly on the mind of the reader, it should be remembered that 130 cubic inches of pure air are required by an adult person *every minute* of the twenty-four hours, and that he should be perpetually surrounded by four cubic feet of fresh air, to insure a continuance of all his vital functions in healthful integrity; and that it is particularly when sickness is in a house, or an epidemic in the neighbourhood, that ventilation and an abundance of fresh air are most imperatively demanded.

VENTRICLE.—A small stomach; a cavity: a name given by anatomists to two of the cavities of the heart, the right and left ventricles; the first sending the venous blood to the lungs, and the second propelling the arterial fluid through the aorta. It is also the name of four cavities in the convolutions of the brain, the two lateral and the third and fourth ventricles.

VERATRUM.—A genus of medicinal plants, of which the *Veratrum album*, or white hellebore, is the most important, from yielding the potent—

VERATRIA. — An alkaloid active principle, which, like strychnia, is a most deadly poison, though from its powerful action on the nervous system it has been prescribed in paralysis, tic-douloureux, trismus, or locked-jaw, sciatica, and in some cases of rheumatism, applied on the centre of a small blister, or else dissolved in spirits of wine, and mixed with camphorated oil, and rubbed in with a glove, in the manner of an embrocation. Veratria, however, is too violent a poison to be used by any non-professional person with safety.

VERDIGRIS. — The sub-acetate of copper. This preparation was formerly in use, in the form of an ointment, as an escharotic in cases of cancer, but is now seldom employed, on account of the severe pain it always induces.

VERJUICE.—An impure vinegar obtained from the wild apple, green grapes, and other acid fruits, but only in use on the Continent.

VERMICELLI. — Fine threads of a paste made with the best wheaten flour and milk, formed in small worm-like cakes, and eaten in soups. See MACARONI.

VERMIFORM, from *vermis*, a worm. —Two processes of the brain or cerebellum, so named from their spiral form or worm-like shape.

VERMIFUGE.—A medicine to destroy and expel worms.

VERMILION.—Cinnabar, a red sulphuret of mercury.

VERONICA.—A common native wild plant, called Speedwell, once in favour as a diaphoretic, but now seldom used.

VERTEBRÆ.—The thirty bones composing the spinal column, but only twenty-four, counting to the sacrum. See SPINE.

VERTEX.—The top of the head, or that part where the hair turns round.

VERTIGO.—A giddiness, dimness of sight, and swimming in the head, a state that generally precedes coma.

VERVAIN.—A medical herb and native wild flower, known as the *Verbena officinalis*, sometimes used as an astringent wash for the eyes.

VESICULA.—A small bladder; from whence are derived the terms vesicle, and vesicular eruption, applied to a peculiar eruptive disease of the skin, in which the rash is marked by a number of small bladders filled with a limpid fluid.

VESICULÆ SEMINALES. — The name of two small oblong glands, composed apparently of a congeries of vesicles, situated at the fundus of the bladder, and whose ducts form a union with the *vasa deferentia*. The function of the *vesiculæ seminales* is to secrete a fluid which appears to supply some vital principle to the seminal secretion of the spermatic cord. See BLADDER, *cut*.

VESTIBULE.—A small cavity in the temporal bone, a portion of the internal ear, situated in the very heart of the petrous portion of the bone, and forming the antechamber to the cochlea, semicircular canals, &c. See EAR.

VIABLE.—Capable to live; a term applied by medical men in midwifery cases to infants born alive, but of delicate constitutions and imperfect development. The earliest age at which a child is likely to live is at seven months; an infant born before the completion of the seventh month is said to be *non-viable*. See INFANTICIDE.

VICHY WATERS, THE.—A noted Continental spa. See WATERS, MINERAL.

VIDIAN NERVE.—A small branch of the fifth pair of nerves.

VIGANI'S ELIXIR. — An obsolete name for the aromatic spirits of ether.

VILLUS (PLURAL VILLI).—Soft, or downy hair; the thick pile on velvet. The whole of the internal coat of the bowels is lined with a thick coat of a downy pile, which anatomists have designated as the *villous coat* of the intestines. The use these long *villi* serve in the bowels is that of brushing off the chyle still adhering to the contents of the bowels as they proceed along their canal, and conveying to the glands the nutriment they pick up or absorb from the passing *egesta*. See DIGESTION.

VINEGAR.—An acid liquor obtained by fermentation from malt, beer, wine, and cider; it is also obtained by distillation from wood, and from the vinegar plant. Vinegar is largely used in medicine, both as an internal and external remedy, and forms the menstruum for several active medicines, such as the vinegar of squills, colchicum, cantharides, capsicum, and some others. United with carbonate of ammonia, it forms the useful fever mixture known as the spirits of mindererus. As a condiment, vinegar acts as a stomachic and tonic, especially with fat or salt provisions, and is particularly beneficial in that manner on long sea voyages. As an antiseptic and disinfectant, vinegar is also an agent of great efficacy. See ACETIC ACID.

VIOLET. — This well-known wild flower, so highly esteemed for its exquisite perfume, and botanically known as *Viola odorata*, was at one time greatly valued for its medical properties, being considered highly beneficial in inflammatory affections of all kinds, both as drinks, made with water or wine, as poultices, ointments, and lotions for sore eyes, all parts of the plant being equally used—leaves, flowers, and root, the latter, when dried and powdered, acting as an emetic. The only preparation of violets in the Pharmacopœia is the syrup, which, with almond oil and syrup of tolu in equal proportions, makes a useful expectorant for young infants. The syrup of violets given alone, in from half a teaspoonful to a full spoonful, acts as a mild aperient for infants up to twelve months old.

VIPER, STING OF.—We have already, under Stings and Bites, Serpent, and other headings, said all that can be of any practical use on the subject of venomous reptiles. The country people, however, regard the oil or grease of the reptile as the only real means of cure for a bite from one; and consequently few farm labourers are without a stock of viper oil, which, despite its filthy smell, they use with unbounded faith, as an embrocation for sprains, and a sovereign cure for poisoned wounds.

VIRUS.—A poison. The word virus is applied by medical men to the fluid contained in the pustules of small-pox, while that of *lymph* is given to the contents of cow-pox. The poison emitted by a snake or adder, or any venomous animal or insect, is, in the same way, called *virus*. The same word is also applied to that subtle agent by which, as in typhus and cholera, the disease is propagated,—in fact, to any fluid of a malignant quality.

VIS A TERGO.—A medical term to signify a force or power from behind, as the action of the heart on the blood.

VISCID.—A term applied to a thickish, glutinous, adhesive, or tenacious substance: treacle and Venice turpentine are good examples of a viscid article.

VISCUS.—Though this word strictly means a bowel or intestine, it is used by anatomists to signify any organ, whether or not connected with the alimentary canal. The liver, spleen, bladder, &c., are each a *viscus;* the word, however, is generally used in the plural, as—

VISCERA.—The several organs of the body, which are usually divided into the abdominal and thoracic viscera. See the *several organs.*

VISION.—We have already explained the anatomy of the eye, and shown that the organ itself is a globe, of about an inch in diameter, composed of three investing coats or tunics,—one to give it shape, firmness, and protection; another to be a medium for the ramification of the nerves and bloodvessels, and by the dark paint on its inner side form an absorbent surface to stray rays of light; and the third a nervous expansion, its centre forming the field of vision. The next portion of the globe was the transparent horn, or cornea, that formed the window of the eye; behind the *cornea* we explained that the first of the three humours that distend and fill up the cavity of the orb (the *aqueous humour*) was situated, behind which hung a circular curtain (the *iris*), with an aperture in its centre (the *pupil*); that a *crystalline humour*, in the shape of a prism, was placed immediately behind the iris, and fitting into a cavity in the last and largest of the humours, the *vitreous.*

In giving a brief account of the physiology of sight, we may premise what we have to say by observing that the eye of itself sees nothing on which it looks. Strange as this assertion may appear to some, it is a fact that Shakspere, long before the theory of light or optics was explained, had a just conception of the truth when he made Brutus reply to Cassius' question, if he could see himself,—

> "No, Cassius; for the eye sees not itself,
> But by reflection of some other thing."

This is exactly the fact; it is the light reflected from the bodies or objects on which we look, that, entering our eyes, produces images of their forms upon the delicate nervous expansion called the retina, from whence the knowledge of these impressions is carried to the sensorium, or brain. The rays of light falling in all directions on the projecting cornea, if they were allowed to enter the eye with those emanating from the object looked at, would confuse and confound the image thrown on the retina. Many of these rays, however, are immediately broken, or reflected and refracted back again, giving that sparkling appearance to the eye so frequently noticed; still more rays pass the cornea than are actually needed, which in turn are also thrown back; the great bulk of the rays, passing through the aqueous, are collected into a focus by the crystalline humour, all stray beams being absorbed on every side by the dark paint on the inner surface of the choroid coat and iris, while the true or proper rays, passing through the three media or humours, are alternately scattered and collected, till, drawn into a focus, they fall on the centre of the retina. The iris acts as a moderator to the retina, shutting out all excess of light by its instant contraction, and expanding when the stimulus is removed. Where, as in the case of the albino, there is no *pigmentum nigrum* or *uvea* to absorb stray or unnecessary rays, they wander about the chambers of the eye, and in a broad light quite confound the vision, the person being unable to distinguish distinctly till night or evening comes on. The two eyes extend the field of vision, add to the intensity of sight, and deepen the impression made on the mind. The reason why we only see *one* object from *two* images arises from the fact that the two optic nerves cross and unite before reaching their seat in the brain. The power possessed by the crystalline lens of advancing and receding, though only to the extent of a few lines, serves to lengthen or shorten the vision. When the density of the media is too great through which the light passes, or the convexity of the cornea or lens is too acute, the focus formed falls short of the retina, and there is a defect of vision amounting to near-sightedness, while the contrary causes produce the opposite effect. To correct this condition, the first case would require flat, and the other convex glasses.

VIS VITÆ.—The force or power of life; the inherent strength of nature; a resistant principle on which the physician more or less calculates to assist him in his efforts to cure.

VITELLUS.—The yolk of an egg; sometimes used to mix with oils to form an emulsion in prescriptions.

VITREOUS.—Any body having a glassy appearance, and being transparent and clear; on this account the name of—

VITREOUS HUMOUR has been applied to the transparent fluid contained in the posterior chamber of the eye. See EYE.

VITRIOL.—There are several articles known under this title,—the oil of vitriol, obtained by burning sulphur in contact with atmospheric air and water, when it is called Sulphuric Acid (which see); and three varieties of stone vitriol, the blue, green, and white vitriols, as the sulphates of copper, iron, and zinc are called. The properties of these three articles are alike, each acting as an emetic, tonic, and as an astringent; the dose, however, is very different in each, as will be found on referring to the metals that yield the crystallized salts, copper, iron, and zinc.

VITRIOL, ELIXIR OF.—There are two preparations in use under this name,—one the simple diluted sulphuric acid, the other having some spice and red Saunders' wood added to the diluted sulphuric acid, to give the compound an aromatic flavour and a bright red colour.

The elixirs of vitriol are used as astringents and refrigerants, and in all internal hæmorrhages, given in doses of from 5 to 10 drops in a little barley water every few hours, will be found very serviceable. When elixir of vitriol is frequently taken, the mixture should be imbibed through a quill or tube, to prevent the acid acting on the teeth. As a cooling beverage in hot weather, 15 drops of the elixir of vitriol in half a pint of cold water, to which a tablespoonful of syrup of orange peel has been stirred in, will be found to make an extremely aromatic, refreshing, and pleasant draught.

VITRIOL, SWALLOWING.—The extremely active and corrosive nature of sulphuric acid renders it, when drunk by mistake, or given intentionally, a most agonizing and dangerous substance; the whole mucous membrane, and all the tissues with which it comes in contact, are instantly destroyed, and a violent inflammation set up in the whole line of the injury. The TREATMENT must, therefore, be prompt and energetic; quantities of soda or potass, dissolved in water, are to be swallowed, or magnesia and chalk, if the others are not at hand, are to be substituted, given in the same way, and then followed by draughts of water or milk. These are then to be expelled by vomiting, and the same measures repeated till the acid is neutralized, when emulsions of honey, almond oil, and mucilage are to be given, with a dose of opium, and such after-treatment adopted as the state of the patient demands.

VOLATILE SALTS.—Carbonate of ammonia, bakers' salts, or stone hartshorn, as this article is variously called. For its general properties, see AMMONIA, and HARTSHORN.

VOLATILE, SAL, SPIRITS OF, is the compound or aromatic spirits of ammonia, used as a stimulant and antispasmodic, and in conjunction with spirits of lavender, the popular remedy for fainting fits, hysteria, &c. See AMMONIA, and HARTSHORN.

VOLTAIC PILE.—A galvanic battery, composed of alternate plates of zinc and copper, or silver and copper, with a pledget of woollen cloth, wetted in acid, interposed between each two plates, the whole pile standing like a pack of cards, only of a proper height, and placed upright. The end of the pile towards which all the copper plates look, is called the negative pole; and the opposite end, towards which the zinc are directed, is the positive pole: a wire, led from either pole, and joined, gives a galvanic shock. The chains of Mr. Pulvermacher, frequently recommended in this work, are small portable galvanic piles or batteries, and may be made either to impart strong stimulating shocks, or to diffuse a steady, almost imperceptible stream through the entire system, or through any part of the body. See MEDICAL GALVANISM.

VOMER.—The name of the thin bone which forms the partition to the nose, so called from its resemblance to a ploughshare.

VOMICA.—A name given by physicians to small tumours in the lungs, which eventually suppurate, burst, and degenerate into abscesses, discharging, by cough and expectoration, a discoloured pus, of different consistencies, and sometimes marked with blood. When there are many such abscesses, the case is called one of suppurating *phthisis*. See CONSUMPTION.

VOMIT, BLACK.—A name sometimes given to the disease known as *Typhus icterodes*, or Yellow Fever, which see.

VOMITING.—This effort of nature to relieve itself of some offensive matter, or substance inimical to the system, is one of the most common and beneficial of all the operations of nature,—not simply because it frees the stomach of some poisonous crudity or oppressive load, but because the efforts made in the vomiting act as a stimulant to the whole body, exciting the circulation and the whole absorbent system to a new and healthier action. On this account, physicians from the earliest ages have regarded vomiting with special favour, as both a safe and expeditious mode of giving a reacting stimulus to the body: hence in fevers, inflammations, and diseases of both an acute and chronic character, emetics have been considered as the most effective of all preliminary measures; for, irrespective of cleansing the stomach of all crudities, and stimulating the bowels, the action of *vomiting*, aided by the drug given to cause it, produces a very beneficial effect on the nervous system and the heart. Independent of these effects, vomiting stimulates the absorbents in a remarkable degree, and on this account, whenever a drug is required to produce a sudden influence on the system, its use should be preceded by a mild emetic.

VOMITING OF BLOOD may arise from blows, kicks in the stomach from a horse, from falls, or from over-straining of the body in an attempt to lift heavy weights, &c.

From whichever of the above causes the accident may arise, the vomiting is accompanied by a cough, the throwing up of the contents of the stomach, mixed with dark, grumous-coloured blood: sometimes, however, the blood is more florid; the darkness of the blood indicating the length of time it has lain in the stomach. The TREATMENT of vomiting of blood from the above causes should commence by the patient swallowing a few small pieces of ice, followed every four hours by a dose of the following mixture; by laying him on his back, with the head raised, and a napkin wrung out of cold vinegar and water placed across the pit of his stomach; and the following day by taking a dose of castor oil. Take of—

Infusion of roses . .	5½ ounces.
Diluted sulphuric acid .	50 drops.
Laudanum	1 drachm.
Syrup of red poppy. .	3 drachms.

Mix: two tablespoonfuls to be taken every four hours.

Vomiting of blood sometimes takes place from a congested state of the stomach, and the consequent effusion into the organ of the blood from some weakened vessel; this form of the affection will be easily understood from the absence of all external injury. The TREATMENT in this case, when the body is robust and the patient young, should consist in either taking from six to ten ounces of blood from the arm, or applying a few leeches about the pit of the stomach; placing the patient in the recumbent position, applying hot water to the feet, and keeping the region of the stomach cool with the cold vinegar and water as directed above, and by giving the following mixture and powders. Take of—

Oak bark, bruised . .	½ ounce.
Boiling water	7½ ounces.

Infuse for four hours, strain, and add—

Tincture of muriate of iron	3 drachms.
Syrup of red poppies .	½ ounce.

Mix: one tablespoonful to be taken every three hours. Take of—

Powdered alum . . .	1 drachm.
Powdered kino . . .	12 grains.
Powdered opium . .	3 grains.

Mix, and divide into six powders: one to be given every four hours. As a beverage, tamarind water, or barley water with a little syrup and elixir of vitriol, should be taken freely, and perfect rest enjoined for some days; at the same time the patient and his room are to be kept perfectly cool, no talking allowed, and all excess of light excluded.

VULVA.—A name applied to the passages, pudenda, and all the external female organs.

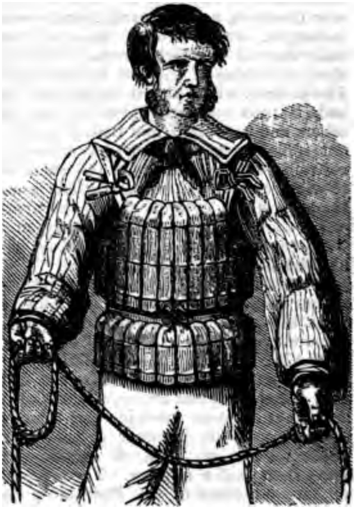
W

W is the twenty-third letter of the alphabet, but is neither used as an abbreviation, nor employed for a numeral.

WADDING.—This article, so essential in the treatment of all cases of burns or scalds, can be procured in sheets at any linendraper's shop, and should form a part, and the most important one, of the medical stores of every household, and especially of those which contain children. The article which we have here and elsewhere in this work designated as wadding, is the material used by ladies to line or stiffen their dresses, and being a fine kind of cotton wool, attached to tissue paper, is usually vended in sheets. Fine wool or cotton will answer the purpose of enveloping the burnt or scalded part as well as the wadding, only it is not so cheap or so easily procured as the other. The great convenience of wadding is, that the sheets can be cut into any length or size required, and the part enveloped in as many layers as may be deemed sufficient to exclude the air. See Burns and Scalds.

WAISTCOAT, CORK, OR LIFE BELT.—The danger attending the inflated life belt or preserver, from the chance of its getting punctured, or the tap becoming hampered, with the great difficulty of properly inflating the apparatus in cold weather, in a storm, or in face of approaching peril, has given unusual popularity to the buoyant, always ready, and always serviceable cork waistcoat, or life belt now in general use; a cut of which we append for the information of emigrants, or those whose necessities may expose them frequently to the dangers of the sea. The advantages of these novel and most useful protectors are enumerated below:—

1. Sufficient extra buoyancy to support a man heavily clothed, with his head and shoulders above the water, or to enable him to support another person besides himself.



2. Perfect flexibility, so as to readily conform to the shape of the wearer.

3. A division into two zones, an upper and lower, so that between the two it may be secured tightly round the waist; for in no other manner can it be confined sufficiently close and secure round the body without such pressure over the chest and ribs as to materially affect the free action of the lungs, impede the muscular movement of the chest and arms, and thereby diminish the power of endurance of fatigue, which, in rowing boats, is a matter of vital importance.

4. Strength, durability, and non-liability to injury.

The extra buoyancy of these life belts is said to be equal to 25 lbs., and will support a man with his clothes on, with the shoulders and chest above the water. See Emigrant.

WAISTCOAT, STRAIT.—A strong loose jacket, to restrain the violent exertions of madmen, or patients labouring under delirium.

Strait waistcoats are made of strong canvas or bedticking, reach from the neck to beneath the ribs, and are fastened behind by strings; the sleeves, which are cut considerably longer than the tips of the fingers, are secured by a cord, which is run through the bottom of each sleeve, and then drawn together and tied: the arms thus confined are then crossed over the chest, and the cords, some yards in length, are tied to the frame of the bed; those of the right sleeve to the left side, and those of the left to the right. The patient, when placed on his back in bed, is thus rendered harmless both to others and to himself, and that, too, without inflicting any pressure or muscular restraint, while he can be fed and attended to with safety. When the patient is allowed to sit up, or walk about, the arms are to be crossed in the same way, and the cords secured in a proper manner behind his back.

WANT'S POWDER.—A secret preparation formerly in vogue for the cure of gout, the principal ingredient being colchicum.

WARE'S GOLDEN OINTMENT.—The preparation known by this name is a very old and popular article, and has been vended as a patent medicine and remedy for bad eyes—or, in other words, for a chronic state of inflamed eyelids—for more than half a century. The red precipitate ointment of the Pharmacopœia is in all respects analogous to the patent medicine known as the golden ointment, and is the article so frequently referred to in this work—the *unguentum hydrargyri oxidi rubri*. A small pieee, the size of a pea, should be inserted at the outer corner of the eye at bedtime, and left to diffuse itself over the eye and lids.

WARTS are excrescences of an unhealthy nature, growing from the cuticle or scarf-skin, and of the same nature as corns, having this distinction, that corns are indurations of the skin growing *downwards*, whereas warts are unhealthy growths springing *upwards*, and are sometimes analogous to those excessive and watery granulations which spring up in wounds and ulcers, known as proud flesh, with this difference, however,—that the latter are a muscular granulation, while a wart is a mere exfoliation of the epidermis, or scarf-skin. Warts may occur on any part of the body, though they are generally found on the fingers, hands, legs, and wrists, and are more frequently met with in childhood and youth than in adult life or advanced age; but whether they occur in infancy or manhood, they equally indicate an unhealthy state of the stomach and bowels, and sometimes become so chronic that they remain for years, preserving their original size, unless irritated by a blow or an external cause, when they will suddenly enlarge to a considerable size. Warts are generally of a pyramidal shape, with a broad base, and having an open, porous apex. Those that spring up spontaneously on the hands of children, after remaining for years without any sensible increase or decrease, will, on the development of the body at the age of puberty, or sooner, if corrective medicine has been taken, fall off, or in a few days entirely wither.

The TREATMENT for warts is extremely simple. The daily touching of the point with any of the ordinary escharotics, such as the sulphate of iron or copper, nitrate of silver, or lunar caustic, or strong acetic acid, will in a short time destroy them. In using caustics, care must be taken not to apply them too freely or too often, as they are liable to be over-stimulative, when the wart, instead of being reduced in size, is often very greatly enlarged. Warts are sometimes removed by means of a ligature,—a piece of silk or fine thread being passed round the base, and then tied tightly, so as to cut off all circulation through the excrescence, when the wart, in consequence of this strangulation, falls off in a few days. Warts sometimes form on the nose, eyelid, on the prepuce or glans in the male, and on the pudenda and vagina in the female; and as in such situations they lead to extreme trouble and inconvenience, they must be immediately removed. In some instances the knife is the only remedy within the power of the surgeon to use, caustic being employed after the excision.

WASHERWOMAN'S SCALL. — A rough, inflamed state of the skin over the backs of the hands, wrists, and forearms, caused by the irritation of the potass or soda, or the turpentine in the soap, combined with the hot suds in which laundresses are obliged to immerse their hands and arms. The heat and smarting is sometimes so severe as to amount to actual pain.

The TREATMENT consists in removing the exciting cause, washing with plain warm water, rubbing the inflamed skin over with a little lard, and enveloping the arms in wadding as if for a burn. The application of the grease, and the exclusion of the air, soon produces a soothing effect on the smarting cuticle, and after a few hours will effect a cure.

WASPS, STINGS OF.—Great danger sometimes occurs from persons being stung in the throat by wasps, the insects eating their way into peaches, plums, or some tempting fruit, and there lying at the heart, unsuspected, till the inconsiderate patient divides the pulp with his teeth, when the roused insect stings him in the fauces or uvula, and often so severely that the inflammation in some cases proves fatal within a space varying from fifteen minutes to twelve hours. See STINGS, &c.

WATER (*Aqua*), considered as a therapeutic agent, is an article of food, though, on account of its special importance, we have not included it under the article of that name. As a dietetic substance, water is a beverage that we cannot possibly do without; we must drink as imperatively as we must eat, and thus, in some form or other, water becomes a necessary of life. Water more nearly resembles nutritive food than it does the heat-generating aliments; that is, in its relation to the human system it more nearly approaches to the character of flesh-forming principles than those of the heat-forming, such as starch and sugar, and for this reason,—that it combines with the tissues of the body, and at once forms a necessary part of its structure. Of the importance of water, and the large amount necessary to the full development of the human body, we have given some idea under the head of Food, where we have shown that a body weighing 154 pounds, when completely dried, loses *one hundred and eleven pounds of water*, driven off in vapour. Water is not only a necessary of human existence, but an indispensable requisite in all vegetable life, some aquatic plants containing as much as 95 per cent. of water. The same remark applies equally to some of the lower orders of animal life. A jelly-fish, that weighed, on being taken, *two pounds*, when perfectly desiccated only yielded SIXTEEN GRAINS; thus sixteen grains of solid matter were capable of organizing two pounds of water.

Water is one of the most valuable substances in nature. It is a transparent fluid, without colour, smell, or taste; liquid at the common temperature, assuming the solid form of ice at 32° Fahrenheit, boiling at 212°, and becoming gaseous directly it passes that degree of temperature, and recovering its liquefaction on an excess of temperature in the one instance, and on a diminution of it in the other. Water is capable of dissolving a greater number of natural bodies than any other fluid, hence it has been called a *universal menstruum;* at the same time it performs more important functions in the vegetable and animal kingdoms, and enters into more important compositions, than any other of nature's proximate principles. Water, though so universally diffused, is seldom to be found pure; even the most limpid and seemingly perfect is more or less impregnated with foreign bodies. Native waters, as they are called, or those from springs or rivers, are all more or less loaded with the salts or earthy particles which they have taken up and dissolved in passing through the various strata of soil over which they travel, some being saline, others mineral: even rain and snow waters, the purest of all waters as regards earthy and saline bodies, are yet impregnated with the numberless impurities for ever floating about in the atmosphere.

Pure water is lighter and more fluid than common water, and is at the same time devoid of smell and taste; it wets more easily than hard water, and mixes freely with an alcoholic or a simple solution of soap, and is not rendered turbid by an addition of minerals in solution. Chemically, water consists of—

1 part of oxygen	8
2 parts of hydrogen	1
	9

Water is taken by chemists as the standard from which the weight of all other bodies is determined, the specific gravity of water being fixed at 1,000. Thus, when we say that ether has a specific gravity of 0·809, we imply that it is 191° lighter than water, the standard by which an equal bulk of ether has been weighed.

SIMPLE OR PURE WATER.—There are several kinds of pure water, arranged, according to their degrees of purity, in the following order:—

1st. *Distilled Water*, or water vaporized by heat in a still, and then condensed, all the saline impurities being left behind.

2nd. *Rain Water*.—This is a water which, having undergone a kind of natural distillation in its passage from the earth to the clouds, has become purified of its earthy salts and impurities, and on that account, when it can be obtained in an open country, removed from factory smoke and town contaminations, is, for all purposes of drink, equal in purity to distilled water; indeed, so near to that article is it in purity, that the specific gravity of rain water is within an inappreciable fraction that of distilled water.

3rd. *Ice and Snow Water.*—Both of these equal rain water in purity, and, when first melted, contain no air, that having been expelled during freezing. It was at one time supposed that the drinking ice water, or melted snow, induced the glandular disease known as *goitre;* this has, however, been proved to be a mistake, as in northern latitudes whole peoples live entirely on melted snow as a drink, among whom the disease in question is unknown. Sailors engaged in the Polar seas constantly consume the water obtained from the blocks of ice found floating on the ocean, and never experience inconvenience or injury from its use. Indeed, as it is only the watery part of the brine that is ever congealed,—that portion left being more intensely salt, according to the amount of ice congealed,—the ice so formed is consequently the purest of all waters. The knowledge that vaporizing salt water deprives it of its saline ingredients has of late years been taken advantage of, on board sea-going steamers, to distil fresh water from the sea on all long or distant voyages.

4th. *Spring Water.*—This water, if it has not filtered through any soluble soil, is almost as pure as rain water. The best spring waters are those which rise through sand or gravel at a moderate depth from the surface. Spring water generally contains, besides the ingredients found in rain water, a small proportion of chloride of sodium (common salt), especially the water obtained from surface wells.

5th. *Well or Pump Water.*—This is only spring water obtained by digging to a greater depth, and is not always so pure as that which percolates naturally to the surface, being generally distinguished by a property named *hardness*, consequently is not capable of dissolving soap. This character is owing to the earthy salts held in solution, more particularly to the sulphate of lime: it also has a larger quantity of carbonic acid gas. Many of the salts contained in hard or pump water are merely suspended in it, and are to be removed by filtering. Pump water, at the same time, may be made to resemble river water by boiling, and then filtering.

6th. *River Water.*—The character of this water differs materially according to the force of its current: when it runs rapidly over a pebbly channel the water is often as pure as soft water, but when the current is sluggish and slow, or the bed clayey, it approaches nearer to well or natural water than any other. In the latter case it frequently contains putrified vegetable and animal substances, either in solution or held suspended in the fluid; this is especially the case in lakes, ponds, and stagnant waters.

There are two kinds of well or spring water generally consumed, and those are the surface-well waters and the deep-well waters. In London it is customary to dig deep into the chalk, and get water from *below* the London clay, by what are called ARTESIAN or deep wells. At a depth of from twenty to twenty-five feet in any part of the London basin or district, an abundance of water can always be obtained; this is called the surface-well water. Many persons believe it to be a matter of indifference whether they consume surface or deep-well water; this, however, is a mistake, for though the water drawn from the twenty-five feet level, or surface, is clearer, cooler, and more sparkling than the fluid drawn from Artesian depths, the latter is much more pure, for the carbonic acid, the cause of the brisk sparkling character of the surface water, is in nine cases out of ten derived from the decomposition of animal and vegetable matters. Their cooler taste at the same time arises from the generation of salts, only obtained from the decomposition of organic matter absorbed from the superficial *strata* of the London basin, and from the sewers and liquid *débris* everywhere percolating through the soil.

MINERAL WATERS.—In natural waters, the foreign substances taken up are generally too small in quantity to give either colour or taste to the water; in those denominated mineral, however, the foreign matter is so considerable as to prevent the water forming a part of the nourishment of animals; in which case it can only become useful as a medicinal agent to man, and in some instances to animals, particularly to the horse. Mineral waters are usually arranged into the five following divisions,—acidulous, alkaline, chalybeate, sulphureous, and saline waters.

1st. *Acidulous Waters.*—These owe their properties chiefly to the presence of carbonic acid, and sparkle when drawn from the spring, have an acidulous taste, and become vapid by exposure, their constituents being, in addition to the carbonic acid gas, bicarbonate of soda, bicarbonate of magnesia, of lime, and sometimes of iron. The most celebrated of these spas or springs are Seltzer, Pyrmont, Spa, Carlsbad, Kilburn, Ponges, St. Parize, Marienbad, and Kissingen. These spas may be divided into the warm or thermal acidulous waters, having a temperature which seldom exceeds 72°, and the cold acidulous spas, having a temperature of about 55°.

2nd. *Alkaline Waters.*—The waters under this denomination have properties of a free alkaline character, displaying an alkaline reaction. The chief of these springs are those of Bath, Buxton, Matlock, Malvern, and Ems.

3rd. *Chalybeate Waters.*—This denomination of waters owes its characteristics entirely to *iron*, generally in combination with carbonic acid; and as this is very often in excess, the waters are acidulous as well as chalybeate. The other preparation of iron found in spas is that of the sulphate, but this condition is very rare. All chalybeate waters have a harsh, styptic, or inky taste, and when fresh drawn are transparent, growing cloudy and dark by standing, and depositing a rusty brown precipitate. All these waters strike an inky black on the addition of a tincture of nutgalls, or any article containing *tannin.* The most important chalybeate springs on the Continent are St. Germaine, Aumale, and Forges, Bologna, Buzot, Baden, Driburgin, Swalback, and Vichy, near Moulins; these, however, are only a few, though the most important, of the Continental chalybeates. Those of chief consideration in Great Britain are Arbroath, Peterhead, Ashton, Ballycastle, Bandon, Bromley, Tunbridge Wells, Coventry, Hampstead, Kirby, Lancaster, Shadwell, and Cheltenham. Ireland contains a great number, and so also does Scotland, beyond what we have recorded; the three most renowned chalybeate spas however, in the United Kingdom are Tunbridge, Brighton, and Peterhead.

4th. *Sulphureous Waters.* — These waters derive their character from the sulphuretted hydrogen which they contain, either pure or combined with lime or some alkali. Sulphureous waters are transparent when newly drawn from the spring, and possess a strong offensive odour like that of rotten eggs, which however passes off when the water is exposed to the air, the fluid becoming thick or turbid. Besides sulphuretted hydrogen, these spas frequently contain carbonic acid, chloride of magnesium, and other saline matters. The most important of these sulphureous springs in Britain are Kilburn, Harrogate, and Moffat, Askeron, Broughton, Clonmel, Tipperary, Cavan, Dudley, Ripon, and Wirksworth in Derbyshire. They are all slightly sudorific and diuretic, and are valuable in all visceral complaints and scrofulous enlargements.

5th. *Saline Waters.*—These, as their name indicates, owe their properties to the presence of saline substances, and are of four orders,—A, those which depend upon the salts of lime; B, those which have the chloride of sodium and magnesium as a base; C, those which contain the sulphate of magnesia, or Epsom salts; and D, those which owe their efficacy to the carbonates, particularly those of soda. Most of the group are purgative, the purgative property of the salt being greatly increased by the quantity of water that holds it in solution. Of these spas, the most renowned are those of Bristol, Cheltenham, Epsom, Leamington, Pancras, Scarborough, Sydenham, Thirsk, and Pitcaithy in Scotland; and on the Continent, Carlsbad, Pullna, Seidlitz, and Scidschutz.

SEA WATER.—The quantity of saline matters contained in sea water is very great, varying in different latitudes: thus, between the degrees of 10 and 20, it is more than one-twenty-fourth; at the Equator it is one-twenty-fifth; and at 57° N. it is only one-twenty-seventh. The saline ingredients in 1,000 parts of sea water are,—

Chloride of sodium . . .	220·01.
Chloride of calcium . . .	7·84.
Chloride of magnesium . .	42·08.
Sulphate of soda	33·16.

When brought up from a great depth its taste is saline; when taken from the surface, it is of a disagreeable bitter.

The sea is the great reservoir or source from which man and every part of the earth derives its fluid nutriment, or water. The direct rays of a tropical sun, beating down with steady ardour on the vast surface of the ocean, rarefy by their heat the pure principles of the water, the vapour rising insensibly into the atmosphere, where it is absorbed as by a sponge, and collected into clouds, which, borne by the wind to either pole, and condensing in their journey north and south, and falling on the earth in rain or snow, sink through the soil, or pour down the mountains to form cascades, streams, rivulets, lakes, and rivers, the excess of water pouring off the earth, and again entering the great bed of the ocean. It is in this progress back to the sea that man either catches it for his use as it falls, or arrests it as it glides under his feet in the form of reservoirs or wells. In this manner we obtain from the sea, rain, river, spring, and well water.

Water, as an article of diet, may either be taken in too large a quantity to be easily carried off by the skin and other channels, and so, by remaining in the system, dilute and impoverish the blood, reducing the amount of solid matter necessary to the well-being of the functions of nutrition and reproduction; or it may be taken in a quantity too small for that moistening of the *ingesta* necessary for the due performance of the animal functions. A deficiency of water in the system makes the blood thick, diminishes the circulation, and impedes every function of the body. In due proportion water is the best, most natural and useful beverage that man can take. As a medical agent, it is the most perfect diluent within the reach of professional art, and, according to the temperature, may be prescribed in almost every disease. In cases of hæmorrhage and internal bleedings, given in the form of small fragments of ice, or at the temperature of 45°, it is an agent of great potency. In febrile and inflammatory diseases water in copious draughts at the ordinary temperature of 60° is an article of considerable importance, while in certain irritable states of the stomach, dependent on an excess of free bile, tepid, warm, or even hot water, in small quantities, is attended with the best results. Again, to increase the action of emetics and diaphoretics, warm diluent drinks are indispensable.

WATER-BRASH.—An affection of the stomach; the result of a general functional debility of that organ, by which the vessels that should secrete the gastric juice throw out a clear, limpid water; hence its medical name of *pyrosis*.

The SYMPTOMS of this disease usually commence when the stomach is empty, either in the morning or the afternoon, and begin with a sense of burning heat and constriction at the pit of the stomach, producing a sensation as if the organ was being drawn up to the spine. To relieve this sensation, the patient folds his arms over his chest, and bends the body forward; *after* a time, a quantity of gas collecting in the stomach leads to an eructation, the patient bringing up from two to four ounces of clear, limpid water; sometimes, though rarely, acid, but generally insipid. Two or three eructations, with a gush of water after each, concludes the paroxysm, and for the time the patient is relieved of his suffering. Females are more subject to this disease than men, and those who live on a milk or farinaceous diet more than those who partake of a good stimulating dietary.

The TREATMENT must begin by removing the exciting cause, and by giving tone to the stomach by such remedies as the subjoined, first acting on the bowels by a compound aloetic or colocynth pill.

Mixture.

Take of—
Quassia raspings . . ½ drachm.
Cascarilla (bruised) . 2 drachms.
Boiling water . . . 8 ounces.
Infuse for six hours, strain, and add—
Diluted nitric acid . . 25 drops.
Mix: two tablespoonfuls to be taken three times a day.

Powders.

Take of—
Nitrate of bismuth . . 40 grains.
Powdered rhubarb . . 20 grains.
Powdered ginger . . 12 grains.
Mix, and divide into six powders; one to be given night, morning, and midday in jelly or honey. Instead of the powders, the following pills may be taken as a substitute; or should the bismuth prove ineffectual, the pills may be employed as an alternate tonic remedy. Take of—
Nitrate of silver . . . 2 grains.
Powder finely, and add—
Powdered rhubarb . . 30 grains.
Mix, and add—
Extract of gentian . enough to make into a mass; to be divided into twelve pills: one pill to be taken three times a day.

Water brash is an affection to which those of a sedentary habit, and who eat their meals hurriedly, without proper mastication, are very liable.

WATER CURE. See HYDROPATHY.

WATER DRESSINGS.—A term used by surgeons to express a mode of treating recent wounds and amputated stumps, by means of pledgets of lint dipped in cold or tepid water, and applied over the closed wound, a piece of oiled silk being laid over the whole, to keep the dressings in their place. See WOUNDS.

WATER ON THE CHEST. See DROPSY.

WATER ON THE HEAD (*Hydrocephalus*), or Dropsy of the Brain, is a disease principally affecting children or very young persons having heads of an unnatural size or shape, and though most frequently occurring between the ages of three and ten years, it is in some cases congenital, the child being born either with the dropsy far advanced or only in the first stage of development. The water in this disease is contained in the shut sac or serous membrane that lines the brain and preserves it from friction on the skull. By the pressure established the water gradually separates the bones of the skull, enlarging it sometimes to an extraordinary size, till the head becoming so heavy and bulky that children are unable to support its weight, and are often for years compelled to keep in a recumbent position, with their monstrous development resting on a pillow.

The CAUSES of water on the head are general debility, a scrofulous disposition, or diathesis, and the irritation of teething, or worms in the bowels.

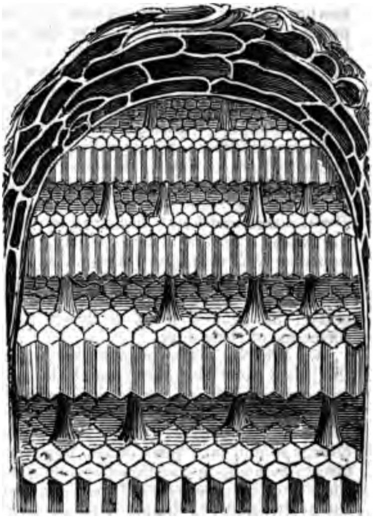
The SYMPTOMS in the first stage of the disease are nausea, vomiting, a dry tongue, flushed face, contracted pupils, great sensibility to light, pain over the eyes and through the temples, causing the child to press its head between both hands, and utter piercing screams. In the second stage the pupils begin to dilate, the pain in the head is more acute, squinting of one or both eyes ensues, the pulse is preternaturally slow, or intermits, and a settled coma, at first slight, gradually oppresses the patient; the pupils are dilated to their utmost, and are insensible to the light; double vision soon after takes place, or a total loss of sight; a difficulty of breathing, with involuntary evacuations and convulsions, in general terminating the patient's sufferings.

The TREATMENT must be guided entirely by the age and strength of the patient, and by the state of the head at the time the practitioner first sees it, and also by the exciting cause. If it should be teething, the gums must be scarified; if caused by worms, they must be expelled before other means can be adopted. To subdue the inflammatory stage, leeches to the temples and nape of the neck, or even opening the external jugular, are the means to be adopted, but in conjunction with a purgative of calomel, jalap, and tartrate of potass, and the frequent employment of such powders as the subjoined, given to abate the action of the heart, and act on the skin at the same time. Take of—

Calomel	12 grains.
Tartar emetic . . .	1 grain.
Antimonial powder .	9 grains.
Compound tragacanth powder	20 grains.

Mix, and divide into six powders: one to be given every four hours to a child from four to six years of age. Blisters will be required for the neck or spine, and the head must be kept cold with ice or evaporating lotions. See DROPSY.

WAX (*Cera*).—The concrete oily matter deposited by bees in cells to form the comb or receptacle of their honey. Wax, after the drawing off or expression of the honey, is washed, melted, and run into moulds, and is naturally of a bright yellow or brownish colour; but being further melted, and run into thin sheets, and exposed to the action of the sun and moisture, is by this bleaching process converted into a pure white. These are the two forms in which wax is found in the shops, the first,—*cera flava*, or yellow wax, and the second, *cera alba*, or white wax. Both kinds are used in pharmacy to make ointments, cerates, and plasters, but are not otherwise employed in medicine. Wax is also obtained from the nests of wasps, of whose peculiar comb we give a cut.



WAX, SECRETION OF.—This is a

thick, tenacious exudation, of a rank, offensive smell, and bitter, acrid taste, secreted by a series of sebaceous glands situated around the *meatus auditorius*, or outer auditory passage of the ear. The use of this secretion in the ear is threefold; in the first place, it serves to moisten the auditory passage, and keep it in a healthy state; secondly, with the hairs of the part it serves to temper the sound, and protect the tympanum from the shock of sudden noises; and thirdly, the acrid smell and bitter taste has the property of preventing insects entering the ear and endangering the delicate mechanism of the organ. The auditory secretion, as the wax of the ear may be called, is liable to changes, like those of the nose or fauces, the secretion being sometimes in such excess, and so hard, as to cause considerable pain, and by blocking up the passage in front of the tympanum, preventing the person from hearing, or materially interfering with that function. At other times the glands become irritated or inflamed, either suppurating and causing excessive pain, under the name of ear-ache, or discharging a large amount of thin, fœtid, and greenish matter, to the great annoyance of the patient. For the first condition, that of indurated wax in the ear, a little cotton wool wetted with almond oil, and put in the ear three or four times a day, will, by detaching the wax from its adhesion to the tympanum or passages, admit of its easy removal afterwards, by syringing the organ with warm water. When suppuration takes place, warm poultices are necessary, till the tiny abscess breaks. For the thin and fœtid discharge, syringing with soapsuds twice a day, and applying wool wetted with almond oil, and a couple of drops of Friar's balsam at night, will, after a few applications, excite the glands to a healthier performance of their duty.

WEANING.—The proper time when the infant should be taken from the breast, and subjected to an artificial dietary, is generally a subject of some anxiety to mothers. The exact time when this change should take place must, however, always be an open question, depending on the strength or weakness of the child, and the health and capability of the mother for the duty of a wet nurse. When mother and child are both in a fair condition of health, the general time of weaning the infant is between the ninth and twelfth month; should the child, however, be very backward with its teeth, and have only cut one or two by the latter period, the time of weaning should be postponed for a few weeks or months. As a general rule, when nature has placed a sufficient number of teeth in the infant's mouth to enable it to mumble the soft aliment on which it is fed, the time has arrived to make it independent of its nurse. All prudent mothers, however, will gradually anneal their infants to the change by beginning to feed them once, twice, and finally three times a day for some few weeks before absolute weaning, at the same time *reducing* the number of times of daily *suckling;* by this means the process is made easy and gradual, and the children are in a great measure spared the distress consequent on an abrupt change.

Some mothers, in the hope of preventing another pregnancy, are in the habit of keeping their infants at the breast till they are old enough to ask for it; this is a great mistake, and is certain to act injuriously on the health of the parent. See ADVICE TO MOTHERS, and INFANT.

WEB, THE.—A name formerly given to an opacity of the cornea. A dimness of sight; objects appearing as if seen through a veil or cobweb.

WEIGHTS AND MEASURES.—The weights and measures by which the medical profession have hitherto been in the habit of prescribing and compounding their medicines the Medical Council have lately thought fit to alter, both in respect to their quantities and in regard to their symbols. With the idea, probably, of preventing mistakes in the compounding of prescriptions through the frequent repetition of characters somewhat similar in appearance but materially different in their quantities, the Society have abolished the signs hitherto used for scruples and drachms and their subdivisions, substituting grains for all quantities short of an ounce. So that instead of prescribing four drachms of an article, as thus,—"carbonas sodæ, ʒiv.," the physician must henceforth write, if he wishes to be accurate, "carbonas sodæ, gr. $218\frac{1}{10}$." With the wisdom or propriety of this change we shall not interfere, satisfied that it will be many years, even should the new arrangement exist so long, before the profession as a body adopt the alteration for general use so needlessly thrust upon them.

The following table represents the new arrangement, the special difference between it and the old one being the alteration of the pound to 16 ounces, the substitution of grains for all quantities under an ounce, and the addition of fl. to the drachms and ounces of all fluid measures.

Weights.

1 pound (lb.)=16 ounces=7,000 grains.
1 ounce (oz.)=437·5 grains.
1 grain (gr.)=1 grain.

Measures.

1 gallon (C.)=8 pints,—O. viij.
1 pint (O.)=20 fluid ounces,—fl. oz. xx.
1 fluid ounce (fl. oz.)=8 fluid drachms,—fl. drs. viij.
1 fluid drachm (fl. dra.)=60 minims,—♏ lx.
1 minim (min.)=1 minim,—♏ i.

WEN.—A popular name for a tumour. By this term surgeons understand a soft, moveable, encysted tumour on some part or other of the body. The disease generally known as a wen is that enlargement of the thyroid gland called bronchocele or goitre.

WET NURSE.—One who undertakes the suckling of a child, when the parent by death or sickness is prevented from rearing the infant herself. See NURSE.

WETTING THE BED.—This accident, so frequently occurring to children, and so well known to mothers, demands careful and vigilant attention. Parents and nurses have hitherto regarded this as a bad and careless habit of the child's, and one rather demanding reprehension and correction than inquiry or medical investigation; this, however, is often a grave mistake, as the child in its sleep can no more avoid the involuntary discharge than it can resist the lethargy of sleep. The CAUSE of this incontinence of urine in children arises from two sources in particular,—the first is the peculiar alkaline condition of the water, which, acting like a corrosive lye on the coats of the bladder, excites that organ to the involuntary action which results in the passage of the urine; the second is the presence in the bowels, particularly in the *rectum*, of a number of worms, which, irritating the nerves of the part, sympathetically affect the bladder directly above, which receives some of its nerves from the same *plexus*. Crude fruit, or other causes of irritation in the bowels, may produce the same result, though the above two are the most frequent.

Instead, therefore, of alarming the child by the fear of punishment, the mother will do well to discover as far as possible which of these causes induces a child formerly cleanly in his habits to commit this nocturnal *faux pas*. If it should proceed from an alkaline state of the urine, the TREATMENT will consist in giving vinegar and pickles with the meals, tamarinds and water, and acidulated drinks, with oranges and fresh acid fruits; and if the patient is at all weakly, the subjoined tonic mixture. Take of—

Infusion of quassia . .	6 ounces.
Quinine	6 grains.
Diluted sulphuric acid	30 drops.

Mix: a dessert or table spoonful to be given three times a day, in water, to children from five to ten years of age. When the accident proceeds from worms, the cause must be removed by the means recommended under Worms, which see.

WHEAT.—This valuable grain contains a larger quantity of gluten than any other cereal. Semolina, soujee, and manna-croup are granular preparations of wheat, and will be found under Food, which see.

WHEY.—The watery part or serum of milk; that portion that remains after making curds. As a diluent and beverage, both in sickness and in health, whey forms one of the best and most wholesome drinks that can be taken; and in cases of cholera, by supplying to the system the fluid of which the disease robs the blood and the body, is a remedy of very great importance.

WHITE ARSENIC.—The oxide of arsenic, a white, impalpable powder. See ARSENIC.

WHITE GUM.—A rash of small white pimples, to which very young and teething infants are liable. See SKIN, DISEASES OF.

WHITEHEAD'S ESSENCE OF MUSTARD.—An old-established patent medicine used in flatulence, rheumatic affections, and indigestion.

WHITE LEG (*Phlegmasia dolens*), OR MILK LEG. See LEG, SWELLED.

WHITES.—A discharge from the vagina; *fluor albus*. See WOMB, DISEASES OF.

WHITE SWELLING.—A scrofulous enlargement and swelling of the ligaments and cartilages of the knee joint, often resulting in the destruction of the articulation. Leeches, blisters, iodine, lunar caustic, and mercury have been the remedies generally employed in this disease; unfortunately, however, it too frequently demands the radical means of excision or amputation to effect a cure.

WHITLOW.—This very painful inflammation may take place either in the fingers, the thumbs, or the toes, and is a deep-seated and tardy suppuration under the tendons of the flexor muscles of the part, often destroying the bone, the ligaments, and the tendons, before the matter can reach the surface, or be discharged by an opening. Owing to the depth at which the matter forms, the unyielding nature of the fascia, and the thick character of the skin, the pain in whitlow is most severe, throbbing, and acute, affecting the hand, arm, or leg, and throwing the body into a state of feverish irritability.

The **TREATMENT** of whitlow consists in frequently plunging the part in very hot water, so as to relax and soften the skin; then, while still moist with the water, lunar caustic should be freely applied along the finger or thumb, and one of the following powders given every three hours for three times, to be followed by an ounce of Epsom salts or a black draught.

Take of—

Dover's powder . . .	30 grains.
Calomel	9 grains.

Mix, and divide into three powders. When the constitutional disturbance is severe, a hot bath should be taken every day, and if the feverish symptoms run high, an emetic ought to be given, while the immersion of the finger in hot water should be repeated frequently; when a yellow speck appears on the skin it indicates the presence of pus, and must be opened, the discharge being encouraged by hot fomentations. Directly on the escape of the matter, the pain subsides; fresh matter, however, soon forms again, requiring to be discharged as soon as it presents; and should sinuses be formed they must be lanced along their full length. The great object in whitlow is to relax and soften the skin, and this is best effected by frequent immersions in hot water.

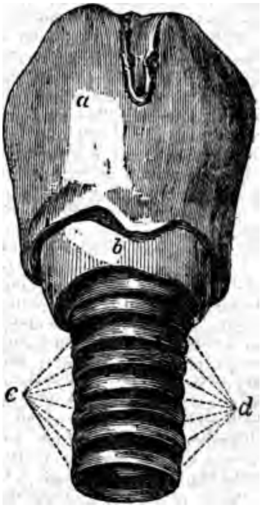
WHORTLEBERRY, Heart Berry, or Bilberry (professionally known as *Uva ursi*).—A trailing plant common to the whole of northern Europe. The whortleberry is only used in medicine as an astringent in affections of the bladder, and in cases of incontinence of the urine; being generally used in a decoction made by boiling one ounce of the leaves of the *Uva ursi* in a pint and a half of water down to a pint. The powder of the dried leaves is sometimes given in doses of 20 grains three or four times a day.

WILDFIRE.—An eruptive affection of the skin, somewhat resembling lichen or *gum rash.*

WILLOW, THE (*Salix*).—There are many varieties of the willow, all of which were used in medicine for their tonic and febrifuge properties long before the introduction of quinine. The bark, which was the only part of the tree in use, depended upon the alkaloid principle, *salicine*, for the medicinal properties it possessed. An infusion of the bark is still retained in the Pharmacopœia, but on account of its uncertain action is seldom prescribed.

WIND DROPSY.—*Tympanites*, or Drum Belly, which see.

WINDPIPE, THE (*Trachea*).—The air passage which, commencing below the larynx, or organ of voice, descends nearly in a straight line till opposite the second dorsal vertebra, where it splits into two branches, called the bronchial tubes, one subdividing into two and the other into three branches—one going to each of the five lobes of the lungs. The windpipe is an almost cylindrical tube, composed of cartilaginous rings connected to each other by a ligamentous substance intermixed with muscular fibres, and covered internally by a soft, delicate, vascular membrane, which constantly secretes a mucous



WINDPIPE.

a, b. The Cartilages of the Larynx. *c.* The cartilaginous rings of the Trachea. *d.* The ligamentous portions of the Trachea or Windpipe.

fluid, to defend the surface over which the air travels from any acrimonious or irritating substance in the atmosphere inspired. To allow the gullet (*œsophagus*), which lies directly behind the windpipe, to convey the food it receives without hindrance to the stomach, the rings or hoops of the windpipe do not sweep entirely round the tube, but terminate at about two-thirds of the circle, a membrane partly ligamentous, partly muscular, closing up the rest of the distance, thus allowing any bulky body to pass along the gullet without being checked by the windpipe, which, had the rings been complete, would have been the case, and guarding against any ordinary danger to the trachea itself from a distended œsophagus. As soon as the trachea has entered the thorax, the rings on its divisions, the bronchial tubes, entirely circle them, and continue to do so through all their numerous subdivisions, becoming, however, as they diminish, gradually less rigid, till they finally disappear in a kind of cartilaginous band.

WINDPIPE, DROPSY OF.—This is a disease that occasionally occurs in connection with general dropsy, after some other diseases. The affection, when it does exist, is very rapid in its progress, and in consequence of its situation almost always fatal. If the disease will not yield to the constitutional means proper for dropsy, and suffocation is imminent, the only hope of relief is in opening the windpipe by the operation of tracheology.

WINDPIPE, INFLAMMATION OF. See Croup.

WINE.—The fermented juice of the grape is the article properly understood by the term of wine, though the juice of any sub-acid fruit will yield by fermentation a wine, but of very inferior quality.

The peculiarity of the grape juice is, that it contains within itself all the elements necessary for vinification, and when left at rest undergoes a spontaneous fermentation, while the juice of all other fruits requires a leaven of some sort to induce the process necessary to convert the juice into wine. Wine, as a therapeutic agent, is the least objectionable of all fermented or distilled liquors. Alcoholic liquors of all kinds are, when taken to excess, injurious to the system, seriously affecting both the stomach and the liver; while malt liquors, though seldom affecting either organ, are liable to produce that condition of the blood that results in gout, a disease to which drinkers of large quantities of porter are especially prone. From all these consequences wine is in a great measure free. Though cider, perry, gooseberry, currant, and grape wine are all included under the generic name of wine, we shall confine this article to those fermented juices of the foreign grape which are specially denominated as wine.

The peculiarity of the foreign wine consists in the presence of tartar or tartaric acid, while all the articles known as British wines contain malic acid. The component parts of all wines are tartaric or malic acid; extractive matter, which in very old wines is deposited with the tartar; volatile oil, on which the flavour of the wine depends; colouring matter, alcohol, and water. Medicinally, wines act as tonics, stimulants, antispasmodics, and antiseptics, according to the purpose for which they are employed. Though all wines possess the same general properties, they differ most materially in their dietetic characters.

Sherry.—This wine stands at the head of the whole order as a general stimulant in cases of debility, and is at the same time the safest wine that can be taken, and has the great advantage of not disturbing the stomach, or producing acidity in either that organ or the bowels.

Madeira.—This would be the best of all the white wines but from the fact that it is occasionally apt to produce acidity; when well kept, however, and free from this objection, it is an admissible wine for the invalid or person with impaired digestion, a glass of Madeira an hour before dinner acting both as a tonic and a stomachic.

Champagne.—Though useful as an occasional stimulant in cases of nervous depression, champagne can hardly be called an invalid's beverage. When taken in excess, it produces a very severe and lengthened headache, and though it possesses diuretic properties, its proneness to produce intoxication materially interferes with its usefulness as a medical agent. Champagne is decidedly objectionable in gout, or for persons of a gouty diathesis.

Port is the most popular of all the wines used in this country, and when not contra-indicated, and it can be taken without affecting the stomach and bowels from its acidity, is one of the most generally useful of all the wines in a medical point of view. Port, when it does not lie heavy on the stomach, is, on account of its invigorating qualities, an excellent beverage for the invalid and persons of middle age. From its acidity, this wine must be shunned by all persons having any affection of the kidneys, or a predisposition to gout.

CLARET.—The wines of Bordeaux, as those bearing the name of claret are often called, are all light and wholesome, and for daily use are among the best wines that can be taken; and though, from their excess of acidity, they are deemed hurtful to gouty and dyspeptic patients, they can frequently (when imported pure, and without the brandy usually added for the English market) be taken with impunity.

BURGUNDY.—This wine is considered much more stimulating than claret; on that account, the quantity taken should be proportionately smaller: it is, however, apt to cause headache, and even indigestion.

RHENISH OR GERMAN WINES. — A celebrated German chemist has declared that gout is unknown in those countries where Rhenish wine is the general beverage. On this authority the Rhine wines have been long considered the proper potation for gouty patients and invalids generally. Though containing a considerable quantity of free acid, from the fact of its being purely tartaric, this wine never produces acidity, but, on the contrary, is the only one that can be taken without producing that effect.

The amount of wine to be taken by an invalid must depend entirely on the case at the time, and must be regulated from one to three glasses a day. When taken for tonic purposes, wine should not be drunk with the meals, but in the hours between them. In cases of typhus or gangrene, wine becomes as necessary as bark or opium which form the chief remedies depended upon. In such cases the amount of wine must depend upon the effect sought to be obtained, and not on the quantity; thus, two or three bottles of wine a day may become necessary in some cases. There are other wines sometimes in use in this country for invalids, such as Canary, tent, Moselle, or Hock; but these are generally given as gentle stimulants. Wine, when taken medicinally for a continuance, should always be accompanied by a crust of bread or biscuit.

WINTER'S BARK.—The bark of the *Drymis Winteri*, a kind of *Canella alba*, a warm, aromatic bark, formerly much in use as a stomachic, but now seldom heard of in practice.

WOLF'S BANE. — The *Aconitum napellus.* The aconite, or monkshood, is a powerful narcotic, and in an overdose a deadly poison. See MONKSHOOD, and ACONITUM.

WOMB, THE (*Uterus*).—If we regard this organ according to the functions it performs in the animal economy, we must consider it as the most important of all the structures in the female body. In shape the womb is of a pyramidal form, or like a flattened pear, which, both in size and figure, it very much resembles, being, in its normal state, between three and four inches in length, and two and a half in breadth at its upper portion, and weighing from half an ounce to two ounces.

The womb lies in front of the abdominal viscera, covered by the *peritoneum*, or investing membrane of the cavity, and is retained in its place by elastic bands, called the round ligaments, the other extremities of which pass out of the abdomen through the anterior openings in the pelvis, and terminate in the fascia covering the inner side of the thigh. From the broad or upper portion of the womb depends on either side a long, hollow passage, called the *fallopian tube*, the end of each tube being rather deeply notched or scalloped, and called by anatomists the *fimbriated* extremity. By means of the elastic bands of the broad and other ligaments, the womb is allowed to float with perfect freedom in the abdomen, its lower end or apex being attached to the vagina by what is called the neck or *cervex* of the womb, so that the actual mouth of the organ, the *os uteri*, or, as it is sometimes denominated, the *os tincæ*, projects into the vagina.

The womb is a partly membranous and partly muscular bag, having an opening on either side at its upper portion, leading into the fallopian tubes, and another at the apex or mouth, where it terminates in the vagina. The womb is supplied with glands, bloodvessels, and lymphatics, and a perfect network or *plexus* of nerves; indeed, in respect of nerves, the uterus is more abundantly supplied than any other organ of the body. In the unimpregnated state, and at the age of puberty, it only weighs about three or four ounces, while during the last month of pregnancy its weight is between three and four pounds; the vessels, also, which in the former condition are extremely small, become, when impregnated, large and distended, like main trunks. Directly conception takes place, the womb begins to enlarge, the *placenta* is formed, the embryo falls from one or other of the fallopian tubes, and becomes attached by what is afterwards called the *funis*, or navel-string, to the centre of the placenta, the organ increasing in size and weight till within a few days of the labour; as soon as that process occurs, it immediately contracts, and in a few days recovers its natural size. The womb performs three distinct functions those of menstruation, conception, and parturition, or the expulsion of the fœtus or child. About the fourth month of pregnancy the womb rises out of the pelvis into the abdomen, where it attains its fullest dimensions, and remains till within a day or two of labour, when the abdominal tumour, as the gravid uterus is called, subsides again into the pelvis.

WOMB, DISEASES OF THE.—The womb, like the other organs of the body, is liable both to acute and chronic inflammations, to several functional derangements, to accidents of displacement and injury, and also to tumours, ulceration, and cancerous affections.

Inflammation of the Womb, or Metritis.—The *causes* of this serious disease are either cold applied to the part, the irritation consequent on the use of over-stimulating injections, the long-continued suppression of the natural discharge, or arises from blows, falls, and difficult or instrumental labours.

The *symptoms* are nearly those of all inflammations of the abdominal organs—pain, increased by pressure; fever, nausea, vomiting, and great tension; while the more distinctive symptoms are excessive tenderness at the neck of the womb, extending to the loins and thighs, and a great prostration of strength.

The *treatment* should begin with a warm bath, hot fomentations, or the hip bath; bleeding, both from the arm, and by leeches or cupping-glasses from the abdomen. The French practice of applying from twelve to eighteen leeches to the pudenda, perinæum, and internal parts of the vagina, has of late years obtained great favour in this country among medical men, and when they can induce their patients to submit to their employment; there can be no question as to the sound principle of the practice. Besides these depleting means, a blister, or counter-irritant by means of a mustard poultice, must be applied over the lower part of the abdomen, saline purgatives given, and the following powders employed, relieving the heat and the difficulty of making water by linseed tea, or any thin diluent, as a general beverage. Take of—

Powdered nitre . . .	2 scruples.
Calomel	36 grains.
Tartar emetic . . .	6 grains.
Powdered opium . .	12 grains.

Mix thoroughly, and divide into twelve powders: one to be given every three hours.

Chronic Metritis, or Inflammation of the Womb, very often arises from the acute form having been badly treated or improperly neglected, and is generally that condition of the organ that gives rise to *ulceration, suppuration,* and *membranous inflammation;* to *enlargement, induration of the mucous follicles*; and *scirrhus* of the neck of the womb; besides causing other structural lesions. As all these diseases are of a surgical character, assume different shapes, and may be single or complicated, and, moreover, demand a personal examination to guide the practitioner in selecting the remedial means, it is quite impossible to lay down any system of treatment for diseases that may require an alteration every day, and different measures for different patients. The Functional Affections of the womb, however, are of more general importance than the organic, and to these we shall now direct our attention, in the following order:—

Suspended Menstruation (*Amenorrhœa*).—This condition may depend upon two causes—an excess of blood in the organ itself or in the system, or from *plethora;* or it may depend on poor and too little blood, upon organic debility, or *anæmia* or *chlorosis;* in other words, on a condition of bloodlessness.

Though the natural discharge is generally so necessary to the health and happiness of women, cases occur where females pass through a long life in perfect health, and actually bring up large families, who have never menstruated, or experienced any inconvenience from the absence of the secretion. Such cases, however, are the exceptions to the rule, that the health, physical and mental, depends on the due performance by the womb of its first natural function.

The *symptoms* are languor, debility, loss of appetite, and general functional derangement; loss of spirits, indifference to all exercise or exertion: hot flushes and cold chills frequently distress the patient; the eyes look dull and heavy, and have a dark circle round their orbits;

the flesh feels soft and flabby, and the countenance assumes a green or yellowish tint; hence the name, given to this form of the disease, of green sickness. In addition to these symptoms, there is usually thirst, pain in the head, and cold extremities, and often swollen feet and legs.

The *treatment* in the plethoric form consists in bleeding, both from the arm and the part; 6 ounces of blood being taken from the system, with six or nine leeches round the external parts; using the warm bath, and purgatives of aloetic and colocynth pills, and afterwards giving the following emmenagogue mixture, while keeping the feet warm, using friction night and morning over the loins and abdomen, and by the daily employment of the hip bath.

Emmenagogue Mixture.—Take of—

Infusion of pennyroyal	7 ounces.
Sweet spirits of nitre .	3 drachms.
Spirits of juniper . .	½ ounce.
Tincture of cantharides	1 drachm.

Mix: three tablespoonfuls to be taken twice a day, or two tablespoonfuls three times in twenty-four hours. When the suppression arises from *anæmia*, the treatment consists in the warm hip bath; the employment of steel and other tonics; electricity, when it can be obtained, or the wearing of an electric chain; friction night and morning along the lower part of the spine; and acting on the bowels by aloetic pills. Some medical men apply a few leeches both to the vulva and round the nipples on the breast, as stimulants to the uterus; these means should be followed by the above mixture, and by such remedies as are prescribed under Chlorosis, which see. This disease is often accompanied by what are called vicarious discharges of blood from the lungs, nose, bowels, or stomach,—efforts of nature to unload the system of the diseased accumulation.

PAINFUL MENSTRUATION (*Dysmenorrhœa*).—The *symptoms* of this affection are pains in the loins, spreading down the groins and thighs, and over the abdomen, with darting colicy pains, and sometimes vomiting and diarrhœa, and a burning heat in voiding the contents of the bladder, particularly severe about the urethra; the nervous system is always more or less affected, and there is often hysteria; these symptoms go on increasing till the usual period for the discharge arrives, when they subside or gradually pass off as the catamenia makes its appearance, which is sometimes abundant, at others scanty, and attended with a tenacious secretion from the coats of the uterus.

The *treatment* consists in relieving the urgent symptoms, and preventing their recurrence. The first object will be achieved by the frequent use of the warm hip bath, a few leeches applied externally, by fomentations to the part, and by the following mixture. Take of—

Powdered nitre . . .	1 scruple.
Camphor water . . .	6 ounces.
Laudanum	1½ drachm.

Mix: two tablespoonfuls to be taken every six hours. The second object will be effected by attention to the state of the patient's bowels, and by giving steel wine, carbonate of iron, or a course of chalybeate waters during the intervening periods of the discharge.

IMMODERATE MENSTRUATION, or Flow of the Secretion (*Menorrhœa*).—The menstruation is said to be immoderate when it returns every ten or fourteen days, or more frequently than usual; when it continues longer than its natural time, or is more abundant than it should be or is customary with the female. This disease may arise from a plethoric or debilitated state of the system.

The *symptoms*, when it proceeds from a fulness of body, are shiverings, acute pains in the head and loins, a turgid or flushed countenance, with great heat of body and irritation of the skin, the pulse being hard and bounding. When debility is the exciting cause the body is cold and pale, the flesh feeling relaxed and soft; the breathing short and difficult, the least exertion producing exhaustion; the face is pallid and anxious, and the pulse small and feeble. It is only in the latter form that *menorrhœa* is ever dangerous or fatal.

The *treatment* in the plethoric form consists in reducing the febrile symptoms by general bleeding, by saline purgatives, acidulated diluent drinks, and the means proper to an inflammatory state of the system; by the avoidance of all exertion, keeping the patient in the horizontal posture, and by the use of the following mixture and powders:—

Purgative Mixture.

Take of—

Infusion of rose leaves	6 ounces.
Epsom salts	1 ounce.
Diluted sulphuric acid	30 drops.

Mix: the fourth part to be taken every night and morning.

Astringent Powders.

Take of—

Sugar of lead	30 grains.
Powdered kino	20 grains.

Mix, and divide into six powders, one to be taken every four hours; or 7 drops of the muriated tincture of iron in a little water may be substituted every four hours for the powders. When debility is present, in addition to the astringent powders just prescribed, or the tincture of iron, the patient must take tonics or such a mixture as the following:—

Tonic Mixture.

Take of—

Cascarilla	2 drachms.
Canella bark	2 drachms.
Boiling water	6 ounces.

Infuse for four hours, and add—

Quinine	20 grains.
Diluted sulphuric acid	30 drops.

Mix: one tablespoonful to be taken every three hours.

In both cases cold applications should be applied to the lower part of the abdomen, bottles of hot water to the feet, and decoction of oak bark, or an astringent lotion of sugar of lead, used as an injection by the vagina twice a day.

Sudden Suppression.—This is most frequently the consequence of cold applied in some form to the feet or body, or it may arise from great mental excitement. From whatever cause, the result is very hurtful to the system, and may lead to serious consequences. To restore the discharge as quickly as possible, a hot hip bath, warm fomentations, and bottles of hot water to the feet are among the first means to be adopted. A dessertspoonful of white mustard seed is a favourite remedy with many females, and often a most effectual one; a more certain means, however, is half a cupful of pennyroyal tea, with a teaspoonful of spirits of nitre, twice a day.

Cessation of the Menstrual Discharge.—The period when this natural secretion determines is the most important and critical in the life of a woman. The number of females who suffer any constitutional disturbance when the catamenia commences is few indeed compared with those who experience inconvenience and suffering at its cessation; as the coming on of this secretion is an evidence of the healthy state of the womb to perform the great function of reproductive life, so its decline shows that it has ceased to be capable of performing that important duty. Though the *change of life*, as this period is called, comes on early in some women—even at thirty-five—the average period in this country is between forty-four and fifty. Great irregularity takes place in the periodic discharge for some time before the final cessation occurs, the female usually experiencing sudden flushes of heat, irritability of the skin, a sense of fulness in the head, with headache and other evidences of constitutional disturbance: this is the time when, if there are any functional or organic diseases existing, they are likely to be increased or rendered incurable; and when women of robust health are attacked with bad legs, and become debilitated, while others, again, rally from constitutional weakness, and enjoy better health for the remainder of their lives. The time is particularly critical to those females who have any swellings or tumours on the breast, or any disease of the uterus or its appendages, as cancerous degenerations are particularly liable to follow or accompany this change of life. With the majority of women, however, the cessation of the catamenia is a period of benefit,—the body fills out, the mind becomes more tranquil, and the spirits, with the bodily strength, rise in due proportion. Some persons consider a long course of medicine to be imperatively called for at this period, but such is by no means generally necessary. Attention to the state of the bowels by occasional doses of rhubarb and colocynth pills, or such as the following, with a warm bath; care in keeping the skin in a soft and healthy state, and guarding the feet from cold and wet, are all the remedies or precautions, as a general rule, that are called for.

Aperient Pills for Females.

Take of—

Compound extract of colocynth	1 drachm.
Powdered aloes	24 grains.
Powdered rhubarb	18 grains.
Powdered ginger	1 scruple.
Extract of hyoscyamus	½ drachm.
Oil of caraway	8 drops.

Mix, and divide into thirty pills: two to be taken at bedtime when required.

Fluor Albus (*Leucorrhœa*), or **The Whites.**—Though this discharge from the vagina and uterus is named from its general colour being white, it is very often of a yellow, brown, or even greenish hue, and varies from a limpid fluid to a tenacious, ropy discharge that may be a mere exudation, or amount to several ounces in every twenty-four hours. The general health usually suffers when this discharge takes place, giving rise to headache, loss of appetite, languor, and debility, with weary pains in the back and down the thighs; the bowels are more or less deranged, and there is often palpitation and hysterical fits. From the age of fifteen all females are liable to this exhausting complaint; and some, indeed, are to a certain extent never completely free from it.

The *treatment* consists in a strict attention to the state of the bowels, a course of tonics, both mineral and vegetable, exercise in the open air, and, when the strength will admit of it, cold sea bathing; regular hours for meals and exercise, going to bed early, and by change of scene and air. Port wine and stout are often of the utmost consequence, but spirits or powerful stimulants are seldom necessary. Concurrent with tonics, a judicious diet, and the general regimen given, must be a course of local treatment, such as the daily use of the cold fresh or salt water hip-bath, and the alternate weekly employment of one or other of the following articles or prescriptions as injections for the vagina.

No. 1. Decoction of oak bark.
2. Decoction of red Peruvian bark.
3. Decoction of logwood.
4. Decoction of pomegranate bark.
5. One pint of cold water, in which three drachms of alum have been dissolved.
6. One drachm of white vitriol dissolved in a pint of water.
7. An infusion of gall-nuts, made by infusing for six hours three drachms of bruised galls in a pint of boiling water, and adding to the liquor, when cold and strained, one drachm of powdered alum.
8. A pint of cold water, mixed with one ounce and a half of tincture of catechu.

Injections of this nature should seldom be used more than twice a day, three large syringefuls being thrown up at every time. The strength of each preparation can be increased whenever necessary. Sometimes leucorrhœa continues so long that it assumes some of the characters of a gleet; in such cases, when neither tonics to the system nor astringents to the part will afford permanent relief, it is necessary to give cubebs or copaiba, the former in half-drachm doses of the powder three times a day, and a small teaspoonful of the latter in mucilage twice a day, with a wineglassful of the infusion of *uva ursi* every six hours. Some medical men prefer a piece of the finest and softest sponge, well soaked in the lotion, as an application in preference to the syringe, as a more certain method of effecting the object sought by the injection.

The womb is sometimes subject to very serious displacements; of these the most noticeable are,—

INVERSION OF THE UTERUS.—A condition in which the organ is in a measure turned inside out: there are two forms of this accident,—the *imperfect*, and *complete*. In the former, the upper portion or *fundus* of the womb falls down into the cavity as far as the neck of the uterus; in the latter, the inversion is carried still farther, passes the mouth of the womb and the vagina, and descends, in some cases, even to the thighs, thus forming a complete case of *procidentia uteri*. Inversion seldom occurs except at or after labour, and though it may follow the placenta in women of very relaxed and delicate constitutions, it is very frequently induced by rough, unskilful management during confinement.

The *treatment* is to restore the organ, by gentle and judicious manipulation, to its natural position; enjoin absolute rest to the patient on the back for some time, with the hips slightly raised; and before the female is allowed to stand, employ the use of a pessary. Of the danger that may accrue from this state of the uterus it is unnecessary to speak, as only a surgeon can minister to such an accident.

RETROVERSION OF THE WOMB is a bending backwards and downwards of the top or fundus of the organ, in such a manner as to fix the overlapping part between the sacrum, or rectum, and the vagina, the latter organ being pressed upwards and forwards, while the bladder is lifted up towards the abdomen, or else compressed on the pubic bones. This kind of accident generally occurs about the third month of pregnancy, and is very difficult to detect; indeed, it can only be ascertained by an examination.

The *treatment* is, in the first instance, to open the bowels—which, in consequence of the pressure, are always confined—by a succession of emollient injections, and empty the bladder by the catheter; the patient being then placed on her hands and knees, the surgeon endeavours to push the organ back into its position.

Polypi of the Womb.—The peculiar pyramidal-shaped tumours of this character affecting the womb vary in size from that of a little finger to a child's head, and are found at the *fundus*, or top, on the inner side of the neck, or at the lower edge of the mouth of the uterus. When small, they neither create pain nor interfere generally with the natural function of the organ, though when they are large, or bleed, they become a frequent cause of miscarriage. Unmarried females are equally subject to this complaint with matrons; and, unfortunately, these morbid growths are by no means rare, and as they are not only the cause of frequent hæmorrhage, but often protrude into the vagina, they become a source of constant suffering and irritation; their removal, therefore, when possible, should always be effected.

Treatment.—This, and cancer of the womb, are the only diseases that demand the use of the speculum, as without the dilatation and light that instrument affords, the surgeon would be unable to apply the ligatures round the polypi, use the knife for their excision, or employ the caustic, the only radical means of extirpating such morbid growths.

Dropsy of the Womb.—This is a very rare disease, and very often confounded with a much more frequent affection, that of—

Dropsy of the Ovaries.—*Ovarian* dropsy may occur on either side of the body, and is most frequently met with in unmarried females. It is seldom that more than one ovary is affected, the coat or membrane of the one that takes on the diseased action gradually enlarging, and which being for a long time free from pain, is unnoticed or disregarded. The fimbriated extremities of the fallopian tubes containing the ovaria being deeply seated in either groin, it is in that direction that the first evidence of the disease shows itself; but the swelling or puffiness, giving no pain, is unnoticed, till the tumour enters the abdomen, when, pressing on the bladder, or some other organ, it begins to cause inconvenience, which increases with the distension. As the tumour mounts still higher, and has more room, the enlargement rapidly increases, when to the physical pain is added the mental suffering consequent on the protuberance giving the unfortunate patient the appearance of being in the family-way. Constipation, irritation of the bladder, loss of appetite, a sense of dragging or bearing down, soon after follows, with many of the symptoms of pregnancy; and it is only when months, and often years, have passed by that even intimate friends will believe that disease, and not immorality, has caused the altered appearance of the patient.

This disease is apt to be mistaken for dropsy of the belly, and for pregnancy. From the latter it can be distinguished by the tumour always commencing, and for a long time remaining, in the side, by the absence of the morning sickness, the unchanged state of the breasts, and by the length of time. From dropsy of the belly it is chiefly distinguished by the absence of the emaciation and careworn countenance peculiar to *ascites.*

Treatment. — Unfortunately for the credit of science, no means have yet been discovered to benefit this disease: the only palliation yet found has been to leave the tumour alone as long as possible, and then draw off the water by a trochar and canulla; fill the sac with wine and water, or a solution of iodine, and treat it like hydrocele; almost every operation undertaken to remove this encysted tumour, though performed with humanity and skill by Lizars, Liston, Syme, and the first surgeons in Europe, has proved unfortunate or fatal.

WOOL, FINE.—The value of this article, like that of wadding, can hardly be over-estimated as a dressing for burns and scalds, when thickly spread over the injured surface. Fine wool is also used as an application for the ears, and by the manner in which it is put into the organ often most materially assists the person hard of hearing, by collecting and reverberating the sounds.

WORMS.—Every animal in creation appears to be subject to some parasitical vermin, which feed on its internal organs. Of the reptiles known as worms man has *twelve* species for ever preying upon some part of his digestive organs; of these the most important are the THREE infesting the bowels, from the stomach to the rectum, each with singular fixity of purpose keeping to its own territory.

Of these three varieties of worms, the 1st, or *ascaris lumbricoides*, or the ROUND worm, demands a principal notice. These parasites are about the size and shape of an earthworm, and take up their location in the small intestines, particularly the *duodenum*, where they prey on the chyle as it is emitted from the stomach, into which they sometimes contrive to dart when the pyloric portal is opened for the passage of the digested aliment.

2nd, The *ascaris vermicularis*, or thread worm. These are extremely small, and when clustered together look like a moving mass of snippings of white thread, being seldom more than a quarter of an inch in length. The ascarides confine themselves almost exclusively to the rectum, and particularly to its lowest portion, thus accounting for that constant itching the child experiences in that part, and for the involuntary escape of the water at night from the bladder. The last is the most formidable of all;—

3rd, The *tænia*, or tapeworm, so called from its flat, white body, and tape-like interminability; for though averaging in general only ten feet in length, it has been known to measure forty, sixty, and a hundred feet. These worms are flat, about a quarter of an inch broad, have their bodies divided into segments, and inhabit that portion of the alimentary canal between the *lumbrici* above and the *ascarides* below. In some countries they are much more numerous than in England. The tapeworm, though sometimes found in children, appears to appertain much more to the adult, and particularly those who live much on milk and cheese.

The *symptoms* produced by all worms are alike, only those from tœnia are much more severe. The appetite of the child declines; he either takes a disgust to his food, or eats ravenously; the countenance is pale and hollow, and there is a peculiar expression about the eyes that points out the cause of irritation; there are pains and uneasy sensations in the bowels, the belly swells, the water becomes turbid, the bowels disordered, and the breath offensive; the child is always picking his lips or his nose, or scratching the fundament, during the day, and grinding his teeth by night; finally, his sleep is disturbed, and his temper made fractious and irritable. The presence of worms in delicate and scrofulous children may induce *œdema* of the limbs, cough, palpitation, fits, convulsions, St. Vitus's dance, and water on the head.

The *treatment* consists in either first killing the worms, or making them so disgusted with their abode that they relinquish their hold of the bowels, and are easily carried from the body by an aperient; or, secondly, by driving them out, *vi et armis*, by the sheer potency of purgative medicines. The best plan is to *kill them first*, and then expel them, nests and all, for they surround themselves with a tenacious kind of slime, in which they coil and breed. The medicines given to kill the worms are powdered zinc or tin, and the hairs of the cowhage mixed with treacle, and administered every morning, fasting, for four or five times, followed, on the fifth or sixth morning, by one of the aperient powders hereafter prescribed. Among the articles which cause the worms to relinquish their hold of the bowels, the most important is the POWDERED WORMSEED, or *chenopodium*, of which from 20 to 40 grains, for children from four to eight years of age, are to be given in treacle twice a day for three days, to be followed on the fourth morning by a purgative powder, the wormseed being resumed the next day for the same period, to be followed again by another purgative powder, and so on till the worms are expelled. Next to the wormseed in efficacy are decoctions of WORMWOOD, of INDIA PINK, POMEGRANATE, or an infusion of RUE or TANSY, from a tablespoonful to half a wineglassful being given every morning, early, for three times, when a purgative powder is to be taken on the fourth day, and the bitters resumed for another period in the same manner, followed by the powder, and both repeated again, if necessary. The powdered MALE FERN, in doses varying from 10 to 30 grains, according to age, is another excellent remedy; so also is the decoction of the fern plant, given as the decoctions above. The essential oil of CHENOPODIUM, given from 2 to 5 drops on lump sugar, on an empty stomach, is another remedy that often acts most successfully. Every third or fourth morning, or whenever there is a rest from the bitters, and two hours before giving the purgative powders, the child should have a full draught of SALT AND WATER, made by dissolving 1½ ounce of common salt in a pint, or 20 ounces, of water. For infants, or children too young to drink the salt water, and especially where there are *thread worms*, LIME WATER is to be substituted, in the proportion of from half a wineglassful to a cupful.

Purgative Powders.

Take of—

Powdered jalap . . .	72 grains.
Powdered scammony .	84 grains.
Powdered calomel . .	24 grains.
Aromatic powder . .	20 grains.

Mix, and divide into twelve powders for a child between four and six years old; into nine powders for one between six and eight years; and into six powders for a child between eight and ten years of age: one powder being given every day of rest from the bitters, and an hour or two after the salt water or the lime water. The salt and water acts as an aperient, and the lime water dissolves the slime in which the worms congregate. As soon as the worms have been expelled, it will be necessary to give the child STEEL WINE, a teaspoonful three times a day to very young children, and a dessertspoonful to older boys and girls, and, with a change of diet and aperients, any of the aromatic tonics.

When tapeworm is the enemy to be expelled, the following mixture is to be given as prescribed, every morning, fasting.

Take of—

Castor oil	1½ ounce.
Syrup of red poppy .	½ ounce.
Turpentine	4 drachms.

Mix, by shaking in a 4-ounce bottle, and give a teaspoonful to a child of four years, a dessertspoonful to one of six, and a tablespoonful to a child of eight or nine years of age, for three mornings, and on the fourth give the salt water and the purgative powder. A remedy which within the last few years has gained a great reputation as an anthelmintic in each variety of worm, is the East Indian plant *kousso*, or *cusso*, but which, like all worm medicines, to be effective must be taken upon an empty stomach. The following is the mode of preparation.

Take of—

Powdered cusso . . .	½ ounce.
Orange peel	2 drachms.
Boiling water . . .	1 pint.

Boil slowly for fifteen minutes, or down to two-thirds, stir in a spoonful of honey, and give to an adult a wineglassful on first waking, repeating the same quantity every half hour for three doses; and two hours after the last dose administer half an ounce, or 6 drachms, of castor oil, and on the third morning repeat the cusso and oil in the same manner. If it is given to children, the dose must be in the proportion of a dessert or one or two tablespoonfuls, according to the age, taken with the same regularity and with a proportionate dose of castor oil.

When adults are affected with worms they should take the same remedies as prescribed for children, only in larger doses, and with two or three compound colocynth pills or a full dose of castor oil afterwards, as a purgative medicine. To make sure that the *nidus*, or slimy nest, and all the *ova*, are carried off, aperient medicines should be given for a few times after the expulsion of the worms, and the stomach and bowels strengthened by a short course of wormwood or tansy tea.

WORM LOZENGES, CHINGS'.—A well-known patent medicine, composed of calomel, scammony, jalap, &c., made into a confection for children. An effective article as a purgative; but something more than merely acting on the bowels is necessary to exterminate worms from the bowels of children.

WORMSEED.—The plant botanically known as the *Artemisia santonica*, is only used as an anthelmintic, in the form of the powder of the seeds. The powdered wormseed is given in treacle in the dose of from half a drachm to a drachm in the morning, and is regarded as one of our best remedies for Worms, which see.

WORMWOOD.—This once highly valued plant, *Artemisia absinthium*, though formerly given with such faith as the most certain emmenagogue, and the best purifier of the blood and beautifier of the skin to be found in the herbal Pharmacopœia, besides possessing stomachic and anthelmintic properties—from whence its distinctive name,—is now never employed in medicine, though, on account of its bitter, aromatic, and tonic effects, it

WORMWOOD.

still retains a place in the Pharmacopœia. Given as an infusion every morning for several days in succession, and then followed by an active aperient, it will be found to act most beneficially as a worm-destroyer. The usual strength of the infusion is an ounce of the wormwood plant to a pint of boiling water; the dose being from a dessertspoonful to half a wineglassful every morning fasting.

WORMWOOD, SALTS OF.—The old name for the subcarbonate of potass.

WORT.—A Saxon word for herb, and applied to many plants, as the colewort, the liverwort, &c.

WORT, SWEET.—The first mashing or infusion of malt, the liquor which, when subsequently boiled with hops and fermented, becomes ale or porter. From the large amount of sugar contained in sweet wort, it makes an excellent beverage for patients suffering from scurvy. See SCURVY.

WOUNDS.—The surgical definition of a wound is a recent solution of continuity in the soft parts, *suddenly* occasioned by external causes, and generally attended at first by hæmorrhage more or less severe. An ulcer, on the contrary, is a solution *slowly* produced, not attended with hæmorrhage, and having a suppurating surface. Some wounds are trivial, and only pierce the cuticle; others go through skin and cellular tissue, divide muscles and tendons, or injure the bone, and even penetrate into cavities and internal organs; indeed, the variety of wounds is endless. For convenience, wounds are divided into incised, punctured, contused, lacerated, poisoned, and gun-shot wounds.

INCISED WOUNDS.—These are the simplest, least dangerous, and soonest healed of all wounds, being generally made with a sharp, clean cutting instrument, that simply divides the tissues in a straight line, without bruising or otherwise injuring the parts and muscles, unless indeed the cut or gash has been inflicted with a sabre, which often cuts out the flesh and deeply injures the bone. Unless the hæmorrhage should be severe, and it is necessary to tie the bleeding artery, all that is requisite with such a wound is to close the lips, and if the incision is too long to be held together by slips of adhesive plaster, two or three sutures or stitches are to be put through the wound, which, with a strip of adhesive plaster between each, and a piece of lint and a bandage to keep the dressing in its place, is all that is generally demanded. For the method of taking up a bleeding vessel, and the treatment of an incised wound, see ACCIDENT, and FIRST INTENTION.

PUNCTURED WOUNDS.—These are wounds made with a narrow-pointed instrument, the external orifice of the wound being small and contracted. The injuries inflicted by a thrust with a bayonet, sword, or pitchfork, are of this order. Wounds of this nature are infinitely more dangerous than cuts, however deep. The great danger attending these kinds of wounds is when some foreign body lodges in them, as the broken blade of a knife, the prong of a fork, or a large thorn or splinter. In such cases the first attention of the surgeon must be directed to extracting the foreign body, and if the forceps cannot grasp and extract it, the part must be poulticed, to encourage suppuration, that it may by that means be detached from its bed, and withdrawn. When there is much hæmorrhage from a punctured wound, but proceeding from an immaterial artery, pressure may be employed to arrest, and pledgets with cold water applied over the orifice to stop it, a few leeches should be placed round the wound, if it show a disposition to inflame, and finally water dressings applied till all heat and tenderness subsides.

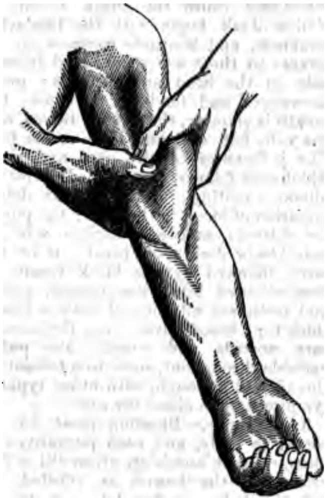
CONTUSED WOUNDS.—This term is applied to those wounds which are occasioned by some blunt instrument or surface violently striking some part of the body. According to the force of the blow, and the nature of the part injured, are these kinds of wounds to be considered as respects their danger. When the force is very severe, the skin and muscles are so disorganized that the death and sloughing of the part may and often does take place. Such wounds are always benefited by the soothing treatment, such as that of emollient poultices or warm fomentations.

LACERATED WOUNDS.—All injuries of this nature present a jagged, torn appearance, in which both skin and flesh are often harrowed up together, and the muscular fibres displaced in all directions. Sometimes there is a laceration and a contusion in this kind of injury; in such cases the danger of sloughing is very much increased. Lacerated wounds of the head are the most dangerous of all wounds; such injuries are generally inflicted with blunt weapons, or they may be caused by falls and collisions.

The *treatment* is to arrange and spread the lacerated parts as smooth and as naturally as possible; to remove all splinters, gravel, or irritating substances; and then cover the part with a piece of lint soaked in warm water, repeating the dressings every two or three hours.

Poisoned Wounds.—This part of the subject has already been treated under Bites and Stings, Serpent Bites, &c., which see.

Gunshot Wounds.—This is a branch of the subject of wounds on which it is unnecessary to enter, as it would fill half a number even to treat so important a theme in the most cursory manner; and as such accidents can seldom be undertaken by any but a skilful surgeon, their insertion can afford no benefit to the non-professional reader. Sufficient can be gathered under the head of Accidents, Fractures, and Wounds, to afford all necessary information to enable any one to take the management of ordinary gunshot wounds till proper professional aid can be procured, and allow them to accept the responsibility of the case. See Contusion, Laceration, Hæmorrhage, Head, Injuries of, &c.



Compressing the brachial artery or main arterial trunk of the arm by the thumbs of an assistant.

In the treatment of wounds the state of the system must never be lost sight of. A pint of stout to the patient every day will often cause sluggish, unhealthy wounds to close firmly and healthily up, while a blue pill, a lotion of black wash, or of a little weak spirits and water, will induce a foul and flabby sore to throw out firm and healthy granulations. There is one important principle to be observed in the treatment of all wounds; that is, to induce, as far as possible, all wounds to heal by the *first intention*, or to bring them as near as can be to the nature of incised wounds. For this purpose, the sides are to be brought as near together as possible, and where stitches are out of the question, this is to be effected by strips of adhesive plaster. When excessive hæmorrhage follows from a wound or injury, pressure is to be made immediately on the main vessel, till the steps recommended under Accidents, for taking up the artery, have been adopted. The above cut shows how pressure is to be made on the brachial artery when no ligature or tourniquet is at hand.

WOURALI.—The name of the poisonous juice with which the Indians tip their arrows. It is obtained from a species of vine (the *Strychnos toxifera*), and is said to be, like the *virus* of the snake, harmless when taken into the stomach, and only fatal when applied to the blood.

WRIST.—This part of the human body is composed of the extremities of the ulna and radius, or bones of the forearm; the eight small bones forming the wrist, or *carpus;* and the beginning of the metacarpal bones. These bones are bound together and covered by tendons, cartilages, fascias, muscles, and integuments. The principal injuries to which the wrist is liable are fractures, dislocations, and contused wounds from the bursting of firearms. In dislocation, the wrist may be displaced upwards or downwards: in reducing such accidents the extension must be made according to the manner of displacement. While one person holds the arm firmly, the surgeon, grasping the hand with his own, gradually draws it out, using his thumbs, when the dislocation is downwards, to push back the ends of the radius and ulna. When he has extended the member till it passes the overlapping bones, the muscles on the slightest relaxation instantly draw the wrist into its proper situation. Sprains, however, are often more tedious to cure than either fractures or dislocations. In such cases the wrist is to be well rubbed twice a day with embrocation, and then firmly bound with a bandage. After a time, cold water is to be poured from a height in a steady stream on the weakened member, and the circulation afterwards restored by vigorous friction: this must be repeated daily for some time.

WRY NECK.—The disease that bears this name is a spasmodic or paralytic affection of one or more muscles of the neck, by the contraction of which the head is drawn forcibly to one or the other side, till the eyes almost look over the shoulder. This is purely a surgical case, and is now cured either by cutting some of the fibres of the offending muscles, or by dividing the nerve that supplies them with motion. Before resorting to this, however, an embrocation of opodeldoc, laudanum, and camphor liniment should be rubbed in along the contracted muscles, and a mustard poultice applied to the spine at the nape of the neck.

X

X.—The twenty-fourth letter of the alphabet. As a numeral, X stands for 10; when placed horizontally (⋈), for 1,000; and with a dash over it ($\overline{X}$), for 10,000. This letter has now no abbreviation in a medical sense, though formerly used to signify an ounce.

XEROPHTHALMIA.—A form of ophthalmia in which the eyeball appears to have lost all its tears, and become dry and arid.

XIPHORIA.—Sword-shaped; another name for the *ensiform* cartilage of the Sternum, which see.

Y

Y.—The twenty-fifth letter of the alphabet, is only used as a numeral; Y standing for 50, and with a dash over it ($\overline{Y}$), for 150,000.

YAM.—A large, coarse root, in shape resembling a man's leg, largely cultivated in America as a food for the negroes. The yam,—botanically known as the *Dioscorea sativa*,—from containing a large proportion of starch, makes, when well cooked, a very wholesome food.

YAW.—The African disease known as *frambœsia*, a species of the *morbus Gallicus*, in which the body is covered with small, tardy, suppurating tumours, or diminutive buboes, like raspberries in size and shape; [illegible] its native name of yaw, a rasp-

YEAST.—The fermentation of malt, and generated during the vinous fermentation of all vegetable juices. Yeast is sometimes used as a therapeutic agent in cases of low or typhoid fever, and externally as an antiseptic for foul and indolent ulcers. The method of giving yeast internally in putrid fever is to mix about a dessertspoonful with a pint of sweet wort, allowing it to stand by the fire for a few minutes till the mass begins to cream or ferment, when a wineglassful of the beverage thus prepared is to be taken every three hours. When yeast is used as a poultice, it is usually mixed with linseed or barley meal. See POULTICES.

YELLOW FEVER (*Typhus icterodes*).—This is a disease almost indigenous to the West Indies, Mexico, the Spanish Main, and the Southern States of North America; it is also to be met with in Northern Africa, and even Gibraltar.

The SYMPTOMS of this dreaded disease, sometimes called the Black Vomit, or Yellow Jack, begin with the headache, weakness, and lassitude common to all fevers: to these are soon added intense pain in the head and eyeballs; great drowsiness and tendency to coma; the mouth is clammy, the tongue furred, and the skin hot, dry, and hard to the feel. The yellowness of the eyes and skin, which soon follows, is succeeded by frothy, bilious vomiting; there is great determination of blood to the head; the pupils are dilated; and as delirium sets in, *petechiæ* or dark spots break out on the body, followed by the black vomit, or dark-coloured bile; the tongue, gums, and teeth are all covered with a black, thick fur; blood bursts from the mouth, ears, nostrils, and bowels; the pulse, variable throughout, sinks to a tremulous thread, and hiccough, with other typhoid symptoms, soon closes the case.

TREATMENT.—Bleeding must be resorted to early, and such purgatives as aloes, calomel, and jalap given till a free action on the bowels is effected, an injection being employed, if necessary, to insure that effect. It is of great consequence to obtain these results as early in the disease as possible, the body being at the same time sponged frequently with cold water, and the linen repeatedly changed. If these steps have been actively carried out, the second stage of the disease may be avoided; if, however, unfavourable symptoms continue, the stimulating system must be adopted, and ammonia, spice, capsicum, &c., with small quantities of arrowroot, frequently given, care being taken to keep the head and chest of the patient cool. The stomach must never be left totally empty at any time, and as action on the bowels is of paramount importance, purgatives must be given with a liberality unknown in colder latitudes. For this purpose the following pills will be found of benefit. Take of—

Extract of jalap . . .	2 scruples.
Compound extract of colocynth	½ drachm.
Calomel	24 grains.
Croton oil	2 drops.

Mix, and divide into twelve pills: three pills to be taken directly, and two every three hours, till five or six actions on the bowels have been obtained.

YELLOW GUM.—The name given to a mild form of biliary fever occurring in infants.

YELLOW WASH.—A lotion made by dissolving corrosive sublimate in lime water. The quantity used depends upon the nature of the sore to which it is to be applied,—usually, however, beginning with 2 grains of the corrosive sublimate to an ounce of lime water, and increasing the strength by 1 or 2 grains at each renewal of the lotion. Yellow wash is generally used alternately with black wash as an application for chancre.

Z

Z.—The twenty-sixth letter of the alphabet. As an abbreviation among medical men, Z stands for a drachm (ʒ); and ZZ. for *zingiber* (ginger), though formerly used for myrrh. As a numeral, the letter stands for 2,000, and with a dash over it (thus, Z̄) for 2,000,000.

ZEINE.—A principle obtained from the Indian corn, or maize plant.

ZEODARY.—The name of several spicy plants, which, like ginger, are used in the West Indies as a spice and aromatic stimulant, and are also there employed to kill worms.

ZERO.—A word used to signify a cipher, a nought (0). The word is principally employed in constructing thermometers and gauges of fire, heat, or temperature, and is the starting-point in most scales for measuring heat or cold. According to Fahrenheit, zero or 0 indicates the point at which the mercury stands when immersed in a mixture of snow and salt, 32° above that being the point at which water freezes. The zero of Réaumur is the freezing point of water, and equivalent to Fahrenheit's 32°.

ZINC.—This metal, now so extensively used in the arts, and known in commerce as spelter, is a hard substance, of a white or greyish hue, not easily bent, and rather brittle, but, when made red hot, can be rolled into sheets, and beaten into any form. It is nearly seven times heavier than water, and, like most metals, is volatile when heated to a high temperature. Zinc is obtained from the ore, calamine stone, by mixing it with the flux, and distilling it in earthern crucibles to which iron tubes are attached, which terminate in reservoirs of water. As the metal rises in vapour, it passes down the tubes and into the water, where it is at once condensed. As a medicine, zinc acts as a tonic, emetic, and astringent, and in its several preparations is a very valuable remedial agent. The preparations are the *white oxide of zinc*, used as an ointment to dry running sores; *chloride of zinc*, a powerful disinfectant; *ether of zinc*, an antispasmodic; *phosphate of zinc; valerianate of zinc*, an antispasmodic, given in doses of from 1 to 3 grains; the *carbonate of zinc* (calamine, or *tutty powder*), used for making Turner's cerate, and as a dusting powder for infants; and the *sulphate of zinc* (white vitriol), the best and most useful preparation of all. As a tonic, the adult dose of sulphate of zinc is from 1 to 2 grains two or three times a day, and as an emetic, from 10 to 30 grains. When used as an astringent lotion, it is usually in the proportion of 2 to 3 grains to the ounce of water, though for the eyes, or for injections, the strength is generally from 1 to 2 grains to the ounce.

ZINGIBERIS RADIX.—The root of Ginger, which see.

ZYGOMA.—A yoke or bridle; from whence we derive the zygomatic arch or process, a bony bridge running from the malar or cheek-bone to the temporal bone, and giving origin to two of the muscles of the face and jaws—the *zygomaticus, major and minor*.

ZYTHIUM, among the old physicians, was a beverage made of infused malt, a kind of wort, or thin beer or ale.

ERRATA.

TIC DOULOUREUX.—[*By some accident, the remainder of the treatment of this neuralgic affection was omitted in its proper place.*]

When the pain comes on in paroxysms at regular recurring intervals, the remedies, as in Intermittent Fever, can only be given with a hope of benefit an hour or two *before* the expected attack. In such cases the best means to employ are the following, taking the draught two hours before the paroxysm, and the pills as directed. Take of—

Sulphate of quinine .	10 grains.
Infusion of roses . .	12 drachms.
Tincture of ginger . .	½ drachm.

Mix, and make a draught, to be taken, if possible, two hours before the attack.

Take of—

Sulphate of quinine .	6 grains.
Tartar emetic . . .	½ grain.
Powdered opium . .	2 grains.
Extract of poppy . .	enough

to make a mass, which divide into three pills: one pill to be taken every half hour after the draught. As a general rule, quinine should not be given till the bowels have been opened; should they not have been so, an aperient pill and draught must be given soon after the above medicines, to prevent their acting hurtfully on the head.

In thin, delicate, or inflammatory subjects, instead of a draught and pills the following powders may be employed. Take of—

Carbonate of iron . .	1 drachm.
Sulphate of quinine .	15 grains.
Aromatic powder . .	1 drachm.

Mix, and divide into four powders: one to be given every half hour before the expected time of attack.

To afford relief during the paroxysm of pain, and where no medicine has been previously given, a suppository of 10 grains of soft opium should be immediately passed up the rectum, and the following draught taken as soon after as possible, followed every quarter of an hour, till relief is obtained, by a claret glassful of port wine. Take of—

Sulphate of quinine .	6 grains.
Brandy	½ ounce.
Laudanum	45 drops.
Sal volatile, spirits . .	1 drachm.
Sulphuric ether . . .	25 drops.
[illegible]	1 ounce.

[illegible] drank instantly. An emetic, [illegible] will arrest the acute [illegible] where no cause prevents its use, should be employed: in such cases, one-half of the doses given in these last prescriptions will be found sufficient to break the force of the paroxysm.

The discovery of chloroform has placed in the physician's hand a powerful agent for good in such cases; but as very great danger attends its indiscriminate use, and as it should never be given but under the eye of a medical man, we have purposely refrained from prescribing it. See NEURALGIA.

WATCH.—[*This article has been unfortunately omitted in its proper place.*]

The importance of time in a medical point of view, as regards punctuality of meals, and regularity in the giving of physic, cannot be over-estimated, indeed, to the invalid it is of paramount importance, and in this respect the watch may be looked upon as the symbol of time, and the perpetual monitor of a nurse's duty.

A watch should consequently always form a part of the requisites of a sick chamber, care being taken that its ticking is not allowed to reach the patient's ear. Under the article Pulse we drew attention to a watch manufactured by Mr. Bennett, well adapted for the study of the pulse by the invalid himself; though as a general rule we should advise patients never to trouble themselves with the subject of their own circulation; for not once in twenty times, even when a faithful estimate of the momentum of the blood is formed, will the information acquired be of the slightest benefit; indeed, it is more likely to prove the contrary, and fill the mind with misgivings, doubts, and alarms. The best guide that a non-professional person can have to the healthy rhythm of his pulse is an appetite for breakfast, and a clean tongue.

Medical men unfortunately give an undue importance to the value of the watch, by constantly parading it before the eyes of their timid patients, who, while under the double scrutiny of the doctor's finger and tale-telling chronometer, are almost afraid to breathe, lest they should upset the physical powers, and thus mar the very purpose for which the watch is used, a knowledge of the accuracy of the heart's action. The medical man in general practice, who is unable fully to understand his patient's pulse, in ninety-nine times out of every hundred, without the affectation of consulting his watch, should go back to his studies till he has properly educated that most important of all the senses, feeling, as far at least as exemplified in touch.

A LIST OF USEFUL PRESCRIPTIONS,

ARRANGED UNDER THE HEADS OF APERIENTS, PURGATIVES, EXPECTORANTS, DIAPHORETICS, ANTACIDS, AND STOMACHICS, ASTRINGENTS, AND TONICS.

There are several prescriptions given in each section, embracing mixtures, pills, and powders, which will be found suited to almost every distinctive phase in the affection for which they are given: thus, under Expectorants, "Cough," medicines will be found to produce sedative, stimulating, or relaxing effects.

Aperient Pills.

(*Mild, for Females.*)

No. 1. Take of—

Compound extract of colocynth	½ drachm.
Blue pill	18 grains.
Extract of henbane	12 grains.
Oil of caraways	6 drops.

Mix, and divide into twelve pills: one to be taken at bedtime, and another in the morning, if necessary.

No. 2. Take of—

Pil. Rufi	2 scruples.
Extract of aloes	10 grains.
Extract of hemlock	15 grains.
Oil of juniper	6 drops.

Mix, and divide into twelve pills: one or two for a dose when necessary.

No. 3. Take of—

Compound assafœtida pill	1 scruple.
Pil. Rufi	20 grains.
Extract of henbane	1 scruple.

Mix, and divide into twelve pills: one or two to be taken for a dose, as required.

No. 4. Take of—

Compound rhubarb pill	30 grains.
Compound colocynth pill	30 grains.
Oil of peppermint	6 drops.

Mix, and divide into twelve pills: one to be taken for a dose night and morning, as needed.

No. 5. Take of—

Extract of colocynth compound	1 scruple.
Blue pill	1 scruple.
Extract of henbane	1 scruple.

Mix, and divide into twelve pills: one or two to be taken for a dose.

Purgative Pills.

(*Strong, for Men.*)

No. 1. Take of—

Powdered aloes	18 grains.
Powdered colocynth	15 grains.
Calomel	18 grains.
Scammony powder	15 grains.
Oil of cloves	5 drops.

Mix, and make into twelve pills: two or three to be taken at once, according to the action required.

No. 2. Take of—

Compound extract of colocynth	2 scruples.
Blue pill	1 scruple.
Oil of caraways	6 drops.
Croton oil	2 drops.

Mix, and divide into twelve pills: one, two, or three to be taken, according to circumstances.

No. 3. Take of—

Powdered aloes	24 grains.
Powdered gamboge	12 grains.
Powdered colocynth	12 grains.
Powdered scammony	10 grains.
Calomel	15 grains.
Oil of peppermint	6 drops.

Mix, and divide into twelve pills: two to be taken at bedtime, and one in the morning if necessary.

No. 4. Take of—

Compound colocynth pill	2 scruples.
Blue pill	1 scruple.
Castile soap	12 grains.

Mix, and divide into twelve pills: one, two, or three for a dose, as required.

No. 5. Take of—

Powdered scammony	½ drachm.
Calomel	1 scruple.
Extract of colocynth	1 scruple.
Oil of cinnamon	4 drops.
Castile soap	15 grains.

Mix, and divide into fifteen pills: two to be taken for a dose. These will be found a safe and effectual pill in all cases where a strong laxative is required.

EXPECTORANTS.

Cough Pills.

No. 1. Take of—

Powdered squills . .	12 grains.
Powdered ipecacuanha	18 grains.
Powdered ginger . .	12 grains.
Extract of hemlock .	½ drachm.

Mix, and divide into twelve pills: one to be taken three times a day.

No. 2. Take of—

Powdered ammoniacum	24 grains.
Powdered squills . .	10 grains.
Powdered ipecacuanha	10 grains.
Antimonial powder .	18 grains.
Extract of henbane .	1 scruple.

Mix, and divide into fifteen pills: one to be taken every six hours.

No. 3. Take of—

Powdered camphor .	20 grains.
Powdered opium . .	6 grains.
Powdered squills . .	12 grains.
Antimonial powder .	18 grains.
Extract of hemlock .	15 grains.
Oil of aniseed . . .	6 drops.

Mix, and divide into twelve pills: one to be taken night and morning, or three times a day.

No. 4. Take of—

Balsam of tolu . . .	1 drachm.

Divide into fifteen pills: one to be taken every four or six hours.

No. 5. Take of—

Powdered guaiacum .	1 scruple.
Powdered ammoniacum	1 scruple.
Powdered camphor .	10 grains.
Powdered opium . .	4 grains.
Benzoic acid	10 grains.
Carbonate of ammonia	12 grains.

Mix thoroughly, and make into a mass with—

Extract of henbane .	1 scruple,

and divide into twenty pills: one to be taken every four hours when the cough is hard and the chest oppressed.

Cough Mixtures.

For asthmatic patients, and persons advanced in life.

No. 1. Take of—

Carbonate of ammonia	½ drachm.
Dover's powder . . .	2 scruples.
Camphor water, to make	6 ounces.
Syrup of squills . . .	½ ounce.
Spirits of nitre . . .	3 drachms.

[illegible]ix: a tablespoonful to be taken every [illegible]ee or four hours, and when there is much wakefulness two tablespoonfuls at bedtime.

No. 2. Take of—

Gum ammoniacum .	1 drachm.
Peppermint water, enough for	6 ounces.
Carbonate of ammonia	1 scruple.

Make an emulsion, and add—

Friar's balsam . . .	3 drachms.
Laudanum	1 drachm.

Mix: a tablespoonful whenever the cough is troublesome.

No. 3. Take of—

Vinegar of squills . .	1 ounce.
Tincture of tolu . . .	2 drachms.
Antimonial wine . .	½ ounce.
Mint water, to make .	6 ounces.
Syrup of red poppy .	½ ounce.
Spirits of sulphuric ether	1 drachm.

Mix: a tablespoonful every three or four hours.

The following mixtures will suit any condition of cough, and may be taken in any case requiring medicines of this nature.

No. 4. Take of—

Almond confection . .	2 drachms.
Warm water	4 ounces.

Make an emulsion, and add—

Spirits of mindererus .	1 ounce.
Syrup of tolu	½ ounce.
Wine of ipecacuanha .	2 drachms.
Spirits of nitre . . .	2 drachms.

Mix: two tablespoonfuls three times a day, or one spoonful every three hours.

No. 5. Take of—

Mucilage	1½ ounce.
Syrup of squills . . .	½ ounce.
Syrup of tolu . . .	½ ounce.
Paregoric	1 ounce.
Spirits of nitre . . .	2 drachms.
Mint water	enough to

make a 6-ounce mixture: one tablespoonful to be taken when the cough is troublesome, and two at bedtime.

No. 6. Take of—

Compound tragacanth powder	2 drachms.
Warm water	3 ounces.
Spirits of mindererus .	6 drachms.
Syrup of tolu . . .	½ ounce.
Syrup of squills . . .	2 drachms.
Paregoric	½ ounce.
Spirits of nitre . . .	3 drachms.
Mint water	2½ ounces.

Mix: two tablespoonfuls for a dose, to be taken as often as necessary.

No. 7. Take of—

Horehound leaves	1 ounce.
Liquorice root	½ ounce.
Boiling water	10 ounces.

Infuse in a saucepan by the fire for six hours, then boil for ten minutes, strain, and sweeten with moist sugar, finally add to 10 ounces of the liquid—

Syrup of squills	2 ounces,

and—

Laudanum	2 drachms.

Mix, and make a 12-ounce mixture. of which two tablespoonfuls are to be taken three times a day.

No. 8. Take of—

Ammoniacum	1 drachm.
Carbonate of potass	2 drachms.
Camphor water	4½ ounces.

Mix, and add—

Syrup of squills	6 drachms.
Spirits of nitre	½ ounce.
Antimonial wine	3 drachms.

Mix: a tablespoonful whenever the cough is troublesome.

No. 9. Take of—

Powdered nitre	2 scruples.
Ipecacuanha powder	10 grains.
Mint water	3 ounces.

Mix, and add—

Mucilage	1 ounce.
Syrup of tolu	½ ounce.
Spirits of mindererus	1½ ounce.

Mix: two tablespoonfuls to be taken three times a day.

No. 10. Take of—

Marsh mallow root, bruised or cut small	1 ounce.
Horehound	1 ounce.
Liquorice root	1 ounce.
Carbonate of potass	2 drachms.
Boiling water	1 pint.

Boil slowly for two hours, strain, and sweeten with honey or moist sugar, and take half a wineglassful three or four times a day.

DIAPHORETIC OR SWEATING MEDICINES.

No. 1. Take of—

Dover's powder	10 grains.

To be taken at bedtime in a little gruel.

No. 2. Take of—

Dover's powder	30 grains.
Antimonial powder	12 grains.
Calomel	9 grains.

Mix, and divide into six powders: one to be taken every four or six hours in a little gruel. These are serviceable powders to keep up a steady action on the skin.

No. 3. Take of—

Powdered nitre	1 scruple.
Camphor water	3½ ounces.
Spirits of mindererus	12 drachms.
Antimonial wine	2 drachms.
Spirits of sweet nitre	2 drachms.
Syrup of saffron	3 drachms.

Mix: the fourth part to be taken at bedtime, night and morning, or three times a day.

No. 4. Take of—

Carbonate of ammonia	30 grains.
Guaiacum powder	1 scruple.
Camphor water	5½ ounces.
Laudanum	1 drachm.
Syrup of saffron	3 drachms.

Mix: two tablespoonfuls three times a day, or the fourth part night and morning.

ANTACIDS, FOR ACIDITY IN THE STOMACH.

No. 1. Take of—

Caustic liquor of potass	1½ drachm.
Laudanum	30 drops.
Lime water	6 ounces.

Mix: one tablespoonful, in a little water, to be taken every four hours.

No. 2. Take of—

Prepared chalk	3 drachms.
Calcined magnesia	2 drachms.
Lime water	6 ounces.
Caustic liquor of potass	1 drachm.

Mix: one tablespoonful, in a little water, every three hours.

No. 3. Take of—

Bicarbonate of potass	1 drachm.
Bicarbonate of soda	½ drachm.
Carbonate of ammonia	1 scruple.
Infusion of calumba	6 ounces.

Mix: two tablespoonfuls twice a day, or one spoonful every three hours. This is a good antacid and stomachic.

No. 4. Take of—

Gregory's powder	3 drachms.
Carbonate of soda	1 drachm.

Mix, and divide into six powders: one to be taken in peppermint water two or three times a day.

No. 5. Take of—

Dried carbonate of soda	2 scruples.
Rhubarb powder	12 grains.
Ginger powder	12 grains.
Soap, yellow	enough to make a mass,

which divide into sixteen pills: one to be taken before each meal, or two night and morning.

Astringents, or Medicines for Diarrhœa or Relaxation.

No. 1. Take of—

Prepared chalk . . .	3 drachms.
Aromatic confection .	2 drachms.
Mint water . to make	6 ounces.
Sal volatile, spirit . .	1½ drachm.

Mix: two tablespoonfuls every three hours till the bowels become more easy.

No. 2. Take of—

Infusion of roses. . .	5½ ounces.
Powdered alum . . .	1 drachm.
Syrup of red poppy .	½ ounce.

Mix: one or two tablespoonfuls as often as required.

No. 3. Take of—

Decoction of oak bark.	5½ ounces.
Electuary of catechu "Terra Japonica" .	3 drachms.
Tincture of bark . .	4 drachms.

Mix: two tablespoonfuls every four hours.

No. 4. Take of—

Prepared chalk . . .	2 drachms.
Powdered rhubarb . .	½ drachm.
Aromatic confection .	1½ drachm.
Tincture of rhubarb . .	½ ounce.
Cinnamon water . .	5½ ounces.

Mix: two tablespoonfuls three times a day.

No. 5. Take of—

Aromatic confection .	1 drachm.
Electuary of catechu .	2 drachms.
Peppermint water . to	6 ounces.
Tincture of catechu .	½ ounce.
Tincture of assafœtida	30 drops.
Laudanum	40 drops.

Mix: take two tablespoonfuls every three or four hours. This is a very useful mixture when the relaxation is attended with pain, flatulence, and colic griping.

No. 6. Take of—

Tincture of kino. . .	1 ounce.

The fourth part to be taken in a little sugar and water in a wineglass every two hours till the diarrhœa is subdued. This is one of the most generally useful astringents, and one of the simplest, both for adult and child, that can be used, from ten drops to a teaspoonful, in a little syrup, may be given to a child from one to six years of age, repeating the dose if required. See article Kino.

Tonics.

No. 1. Take of—

Infusion of roses . .	6 ounces.
Quinine	1 scruple.
Diluted sulphuric acid.	40 drops.

Mix: one tablespoonful to be taken three *or four times a day.*

No. 2. Take of either—

Infusion of gentian and orange peel Infusion of calumba and lemon peel Infusion of quassia and cascarilla Infusion of oak bark and cloves	5½ ounces.
Carbonate of ammonia	1 scruple.
Bicarbonate of potass .	1 drachm.
Compound tincture of bark	½ ounce.

Mix: two tablespoonfuls three times a day.

No. 3. Take of—

Hops	2 drachms.
Orange peel	2 drachms.
Boiling water . .	7 ounces.

Infuse, strain, and add—

Tincture of bark . .	6 drachms.
Spirits of sal volatile .	2 drachms.

Mix: one tablespoonful to be taken every three hours.

No. 4. Take of—

Infusion of quassia . .	5½ ounces.
Tincture of ginger . .	2 drachms.
Tincture of the muriate of iron	1½ drachm.

Mix: one tablespoonful in a little water four times a day.

No. 5. Take of—

Calumba root . . .	2 drachms.
Cardamom seeds, bruised	1 drachm.
Ginger root	1 drachm.
Boiling water . . .	8 ounces.

Infuse and strain.

Diluted nitro-muriatic acid	40 drops.

Mix: one tablespoonful to be mixed with three of water, and taken every six hours.

No. 6. Take of—

Quinine	2 scruples.
Ginger powder . . .	1 scruple.
Extract of gentian, soft	enough to

make into a mass. Divide into twenty pills; one to be taken one, two, or three times a day, according to the effect required.

Embrocations.

No. 1. Take of—

Compound camphor liniment	1½ ounce.
Spirits of sal volatile .	½ ounce.

Mix: to be used as required.

No. 2. Take of—

Compound camphor liniment	1 ounce.
Opodeldoc	1 ounce.

Mix.

No. 3. Take of—

Opodeldoc	½ ounce.
Laudanum	½ ounce.
Compound camphor liniment	½ ounce.

Mix. Either of the above forms may be used as an embrocation to rub the throat or joints in cases of sprains, or when stimulating applications are required, the last being especially serviceable when there is much pain in the part.

For hard and swollen breasts, the consequence of accumulated milk, the following prescription will be found of benefit in dispelling the tumid state of those glands.

No. 4. Take of—

Compound camphor liniment	1 ounce.
Spirits of sulphuric ether	½ ounce.

Mix: to be rubbed lightly over the breast, and then allowed to evaporate. This should not be used more than three times a day, and then merely spread over the part. Care must be taken not to use this embrocation near the fire, or the light of a candle or of gas.

No. 5. Take of—

Tincture of iodine	1 drachm.
Compound camphor liniment	9 drachms.
Spirits of sal volatile	2 drachms.

Mix.—A good discutient embrocation in cases of scrofulous enlargement of the joints or glands.

Liniments.

The following applications will be found useful in all cases of sprains, chronic swellings, weakness of the joints or muscles, and in rheumatism and lumbago.

Camphorated Oil.

No. 6. Take of—

Camphor, cut into small pieces	2 drachms.
Olive oil	2 ounces.

The oil is to be poured on the camphor in a bottle, and then placed, without a cork, in a moderately warm oven for an hour or two, till, on shaking, the camphor is quite dissolved; or the bottle may be stood in a jug of hot water for the same object, that of dissolving the camphor. This preparation may be used alone, or in combination with other ingredients.

In cases of dropsy, camphorated oil makes the best external application that can be used; and if rubbed frequently over the dropsical part, and for several minutes at a time, will, by its action on the kidneys, rapidly reduce the swelling.

No. 7. Take of—

Camphorated oil	2 ounces.
Turpentine	½ ounce.
Hartshorn	½ ounce.

Mix.—A good liniment for rheumatism, sore throat, &c.

No. 8. Take of—

Camphorated oil	2 ounces.
Opodeldoc	1 ounce.
Laudanum	1 ounce.
Oil of amber	2 drachms.
Hartshorn	6 drachms.

Mix.—A useful application for cases of lumbago, sprains, &c.

No. 9. Take of—

Mustard	½ ounce.

Mix smoothly in a mortar with—

Spirits of horseradish	2 ounces.
Spirits of camphor	½ ounce.
Olive oil	2 ounces.
Turpentine	1 ounce.
Hartshorn	1 ounce.

Shake well together till the whole is incorporated. A good stimulating liniment in cases of long-standing rheumatism or paralysis. This preparation must always be shaken before being used.

No. 10. Take of—

Linseed oil	2 ounces.
Lime water	2 ounces.

Mix by shaking together. This liniment, in colour like the yolk of an egg, was at one time largely used in Scotland as a dressing for burns, and is still known by the name of Carron Oil.

No. 11. Take of—

Olive oil	2 ounces.
Hartshorn	1 ounce.

Shake together. This preparation, commonly known as hartshorn and oil, is chiefly used as an application for sore throat; when made, however, with camphorated oil instead of olive oil, the efficacy of the liniment is very greatly increased.

No. 12. Take of—

Opodeldoc	1 ounce.
Laudanum	1 ounce.

Mix. This will be found a very serviceable liniment in neuralgia of the head and face, especially if rubbed well into the part, and a piece of piline soaked with the liniment tied on over the affected nerve.

GARGLES.

No. 1. **Astringent Gargles.**—Take of—

Red sage	1 ounce.
Boiling water	10 ounces.

Infuse for 3 hours, strain, and add—

Burnt alum	1 drachm.

Mix, and make a gargle.

No. 2. Take of—

Sage tea, made as above	8 ounces.
Vinegar	2 ounces.

Mix for a gargle.

No. 3. Take of—

Bruised oak bark	1 ounce.
Boiling water	11 ounces.

Infuse for four hours, strain, and add—

Tincture of catechu	1 ounce.

Mix for a gargle.

No. 4. Take of—

Pomegranate and oak bark, of each	6 drachms.
Boiling water	12 ounces.

Infuse for four hours, strain, and add—

Powdered alum	1½ drachm.

Mix, and make a gargle.

No. 5. Take of—

Tincture of myrrh	½ ounce.
Tincture of rhatany	½ ounce.
Tincture of kino	½ ounce.
Camphor water	6½ ounces.

Mix. The gargle selected should be used either every two or every four hours, or three times a day, the throat being gargled twice at each time, and the process continued as long as the patient can support the want of breath. Care should be taken in all cases not to swallow the gargle, as it may act unpleasantly on the bowels.

Stimulating Gargles.

No. 6. Take of—

Tincture of capsicum	2 drachms.
Tincture of myrrh	½ ounce.
Tincture of bark	½ ounce.
Camphor water	7 ounces.

Mix.

No. 7. Take of—

Solution of chloride of lime	3 drachms.
Syrup of ginger	1 ounce.
Water	7 ounces.

Mix.

No. 8. Take of—

Infusion of roses	9 ounces.
Syrup of roses	1 ounce.
Diluted sulphuric acid	1 drachm.

Mix.

No. 9. Take of—

Infusion of roses	7 ounces.
Burnt alum	20 grains.
Tincture of myrrh	½ ounce.
Simple syrup	½ ounce.

Mix, and make a gargle.

No. 10. Take of—

Cayenne pepper	1 drachm.
Vinegar	1 pint.

Macerate for three days, frequently shaking the bottle; carefully filter through paper, to prevent the passage of any particle of pepper. Then take of this—

Cayenne vinegar	3½ ounces.
Camphor water	3½ ounces.
Tincture of myrrh	½ ounce.
Simple syrup	½ ounce.

Mix, and make a gargle, to be used in cases of malignant sore throat, increasing the quantity of the cayenne vinegar half an ounce every time the gargle is repeated. The above preparation of cayenne or capsicum vinegar makes an excellent stimulating condiment with cold meat, useful for persons with weak or sluggish digestion.

No. 11. Take of—

Barley water	10 ounces.
Diluted nitric acid	20 drops.
Diluted muriatic acid	10 drops.
Tincture of myrrh	½ ounce.
Simple syrup	1 ounce.

Mix. A good gargle when used with a little water, in cases of sloughing or *phagedænic* sore throat.

Plain warm water, salt and water, vinegar and water, or water in which saltpetre or alum are dissolved, may be used as gargles in cases where simple relaxing or astringent gargles are required.

Collyriums, or Eye Waters.

Lotions for the eyes are principally of two kinds,—those which relax and soothe, and those which stimulate and contract.

Sedative Lotions for the Eyes.

Warm water is the most universal, and certainly the simplest of all applications for the eyes; care, however, must be taken that the temperature does not exceed 80 or 85 degrees.

Before proceeding to give prescriptions for lotions or washes for the eyes, it is necessary to observe here, that in all cases in which those delicate organs are affected, as little actual contact with the part as possible should be carried on. Dabbing the eye with cloths wetted in the lotion or warm water is by many persons considered the best, indeed, the proper mode of procedure; this, however, is a decided mistake, and an error more likely to injure than benefit the affected organ.

When fomentations are required, a piece of lint four or five times doubled to the size of the part should be soaked in the liquid ordered, and the excess of moisture pressed out, laid smoothly over the closed eye, a thin handkerchief or length of bandage being passed across the head merely to keep the dressings in their place; but when the eye is to be washed or bathed in the lotion prescribed, an eye-glass, a vessel made for the purpose, and of a proper shape, should always be employed. Into this species of egg-cup glass a part of the lotion is to be poured, till the vessel is full; the lids of the affected eye are then to be separated with the thumb and finger of the left hand, and so kept apart till the right hand has placed and fitted the glass of lotion to the eyebrow, the head being bent to meet it; the left-hand fingers are then to be removed, and by a gentle motion of the glass with the right hand, the lotion shaken over the uncovered globe of the eye. When the eye is ordered to be bathed every two or three hours, the process just described should be repeated two or three times on each occasion, fresh lotion being put in the glass every two or three hours, or on each return of the prescribed time.

No. 1. Take of—
Three poppy heads, cut small.
Water . . . . 10 ounces.
Boil slowly down to 6 ounces, strain, and use lukewarm, either as a fomentation on lint, or as a lotion in the eye-glass.

No. 2. Take of—
Decoction of poppy heads, as above . . 6 ounces.
Sugar of lead . . . . 12 grains.
Dissolve, and make a collyrium.

No. 3. Take of—
Camomile flowers . . ½ ounce.
Water . . . . 10 ounces.
Boil slowly for two hours, strain, and use the lukewarm liquid either as a fomentation or as a lotion.

No. 4. Take of the—
Decoction of camomiles, as above . . . . . 6 ounces.
Sulphate of zinc . . . 6 grains.
Dissolve, and make an eye-water.

No. 5. Take of—
Laudanum . . . . 1 drachm.
Water . . . . . . 6 ounces.
Mix; make an eye lotion.

No. 6. Take of—
Extract of henbane . 10 grains.
Extract of hemlock . 10 grains.
Water . . . . . . 6 ounces.
Mix, and make a soothing lotion.

No. 7. Take of—
Powdered opium . . 4 grains.
Sugar of lead . . . . 10 grains.
Hot water . . . . . 20 ounces.
Rub down, mix, and strain, to make a soothing lotion; to be used when nearly cold.

STIMULATING LOTIONS FOR THE EYES.

No. 8. Take of—
Distilled water . . . 8 ounces.
Spirits of wine . . . 1 drachm.
Mix, and make a lotion.

No. 9. Take of—
Camphor water . . . 6 ounces.
Sulphate of zinc . . . 6 grains.
Dissolve.

No. 10. Take of—
Elder flower water . . 6 ounces.
Sulphate of zinc . . . 6 grains.
Sugar of lead . . . . 6 grains.
Dissolve.

No. 11. Take of—
Distilled water . . . 6 ounces.
Sulphate of copper . . 4 grains.
Dissolve.

No. 12. Take of—
Distilled water . . . 6 ounces.
Lunar caustic . . . 3 grains.
Dissolve.

A TABLE OF THE DOSES OF THE ARTICLES MOST FREQUENTLY EMPLOYED IN MEDICINE.

		Adult dose.
Aloes powder . . .	from	4 to 10 grs.
Alum powder . . .	„	10 to 20 grs.
Ammonia, carbonate	„	5 to 10 grs.
Antimony powder .	„	4 to 6 grs.
Aromatic confection.	„	10 to 20 grs.
Assafœtida	„	2 to 5 grs.
Bark, Peruvian, powder	„	1 to 2 drms.
Belladonna extract .	„	½ to 1½ grs.
Benzoic acid . . .	„	5 to 10 grs.
Bismuth, nitrate . .	„	5 to 10 grs.
Calomel	„	4 to 6 grs.
Calumba powder . .	„	2 to 6 grs.

		Adult dose.
Camphor	from	1 to 4 grs.
Catechu infusion . .	„	1 to 2 ozs.
Chloroform	„	3 to 10 drops
Colchicum powder .	„	3 to 8 grs.
Colchicum vinegar .	„	20 to 60 drops
Colchicum wine . .	„	30 to 60 drops
Colocynth extract .	„	5 to 10 grs.
Colocynth powder .	„	4 to 8 grs.
Croton oil	„	1 to 2 drops
Cubebs oil	„	10 to 20 drops
Cubebs powder . .	„	½ to 1 drm.
Digitalis extract . .	„	1 to 5 grs.

		Adult dose.
Dover's powder	from	10 grs.
Elaterium	„	¼ to 1 grain
Ergot of rye	„	30 to 60 grs.
Galbanum	„	4 to 10 grs.
Gentian extract	„	5 to 10 grs.
Gentian infusion	„	1 to 2 ozs.
Ginger powder	„	3 to 6 grs.
Guaiacum powder	„	10 to 20 grs.
Gum	„	2 to 3 drms.
Henbane extract	„	10 to 15 grs.
Iodine	„	½ to ¾ grn.
Iodide of potassium	„	3 to 10 grs.
Ipecacuanha powder		1 grn.
„ „ as an emetic		10 grs.
Ipecacuanha wine	from	10 to 30 drops
Jalap powder	„	10 to 15 grs.
James's powder	„	4 to 6 grs.
Kino powder	„	5 to 10 grs.
Magnesia, calcined	„	½ to 1 drm.
Magnesia, carbonate	„	1 to 1½ drms.
Manna	„	2 to 4 drms.
Mercury	„	½ to 1 oz.
Morphia, acetate	„	¼ to 1 grn.
Musk	„	5 to 10 grs.
Oil, castor	„	6 to 8 drms.
Oil, essential, of peppermint, &c.		1 drop
Opium gum	„	1 to 2 grs.
Opium powder		1 grn.
Poppy extract	„	10 to 15 grs.
Potass, bicarbonate	„	20 to 30 grs.
Potass, sulphate	„	20 to 60 grs.
Quassia infusion	„	1 to 2 ozs.
Quinine	„	1 to 6 grs.
Rhubarb extract	„	5 to 10 grs.
Rhubarb powder	„	10 to 15 grs.
Salts, Epsom	„	6 to 10 drms.
Salts, tasteless		1 oz.
Sarsaparilla extract	„	1 to 2 drms.
Sarsaparilla powder	„	½ to 2 drms.
Sarsaparilla, compound decoction	„	4 to 6 ozs.
Scammony powder	„	10 to 15 grs.
Senna confection	„	2 to 4 drms.
Senna infusion	„	2 to 3 ozs.
Senna powder	„	1 to 1½ drms.
Soda, carbonate	„	20 to 60 grs.
Squills powder	„	1 to 3 grs.
Squills syrup	„	1 to 2 drms.
Squills vinegar	„	30 to 60 drops
Sulphur, milk of	„	2 to 3 drms.
Sulphur, sublimed		2 drms.
Tartar emetic	„	1 to 2 grs.
Turpentine	„	½ to 4 drms.
Tolu balsam	„	20 to 30 grs.
Tolu syrup	„	2 to 4 drms.
Tragacanth, compound *powder*	„	20 to 40 grs.
Valerian powder		10 grs.
Whortleberry powder	from	20 to 40 grs.
Zinc, sulphate	„	1 to 2 grs.
„ as an emetic	„	15 to 30 grs.

For the dose of liquid preparations, see TINCTURE. In the above list of drugs, the amounts ordered are for adult males; as a general rule, females require ONE FOURTH LESS than males. For the exact quantities necessary for children it is not easy to lay down any special rule, as some children require a much larger proportion than others. Of calomel and purgative medicines, children can bear very large doses in proportion to the standard quantity for the adult; with opium and the narcotics, the fact is just the reverse, all such articles demanding great care and judgment. The following table is acted upon by some medical men, but we cannot recommend it as a *certain* guide to the exact quantity to be given; to ascertain that fact, the reader is referred either to the article in its place in the Dictionary, or to the prescriptions for children's powders.

RULE.

A child from 1 to 2 months requires from a fifteenth to a twenty-fourth of an adult dose.

A child at 6 months requires one-eighteenth of a full dose.

A child from 9 to 12 months requires one-fifteenth of an adult or full dose.

A child of 2 years, one-fourteenth.

A child of 5 years, three-eighths.

A child of 8 years, one-half.

A boy of 12 years, five-eighths.

A lad of 16 years, three-fourths.

And at 20 years, seven-eighths.

To make the above remarks more practical, if we suppose the dose of powdered senna for an adult of 30 years of age to be one drachm, then for a person between 21 and 14 years of age it would be two-thirds of a drachm, or 2 scruples.

From 14 to 7 years of age, one-half, or half a drachm.

From 7 to 4 years of age, one-third of the full dose, or one scruple.

For a child 4 years of age, one-fourth, or 15 grains.

For a child 3 years of age, one-sixth, or 10 grains.

For a child 2 years of age, one-eighth, or 8 grains; and

For a child 1 year old, one-twelfth, or 5 grains.

London: J. & W. RIDER, Printers, 14, Bartholomew Close, E.C.